QUANTA COMPUTER INC.

L5TD Serial Service Menu
Belinea 101551(111505)

July, 25, 2003 Revision: 1B

Issued By: **T.H. Chu**

Checked By: Benjie Tsao

History Page

Reversion	Date	Remark
1A	7/17/2003	1ST Released.
1B	7/25/2003	add power & inverter ckt., update V2 Panel P/N

Content

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians.
Any attempt to service or repair the product or products dealt within this service information by anyone else could result in serious injury or death.

SAFETY PRECAUTIONS

1. CAUTION:

No modification of any circuit should be attempted. Service work should only be performed after you are through familiar with all of the following safety checks and servicing guide lines.

2. SAFETY CHECK

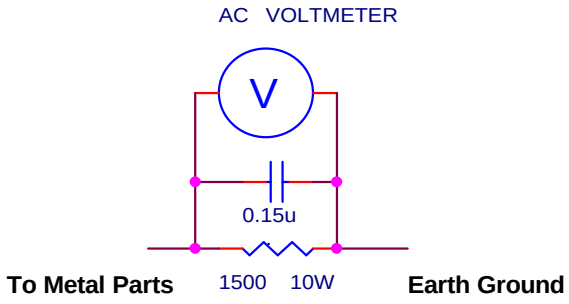
Care should be taken while servicing this LCD display. Because of the high voltage used in the inverter circuit. These voltage are exposed in such areas as the associated transformer circuits.

3. POWER SUPPLY REQUIREMENTS

The external power converter for this display utilizes AC and DC cords, AC cord is detachable, but DC cord is permanently attached. Any attempt to replace another adapter could result in serious problem on the display.

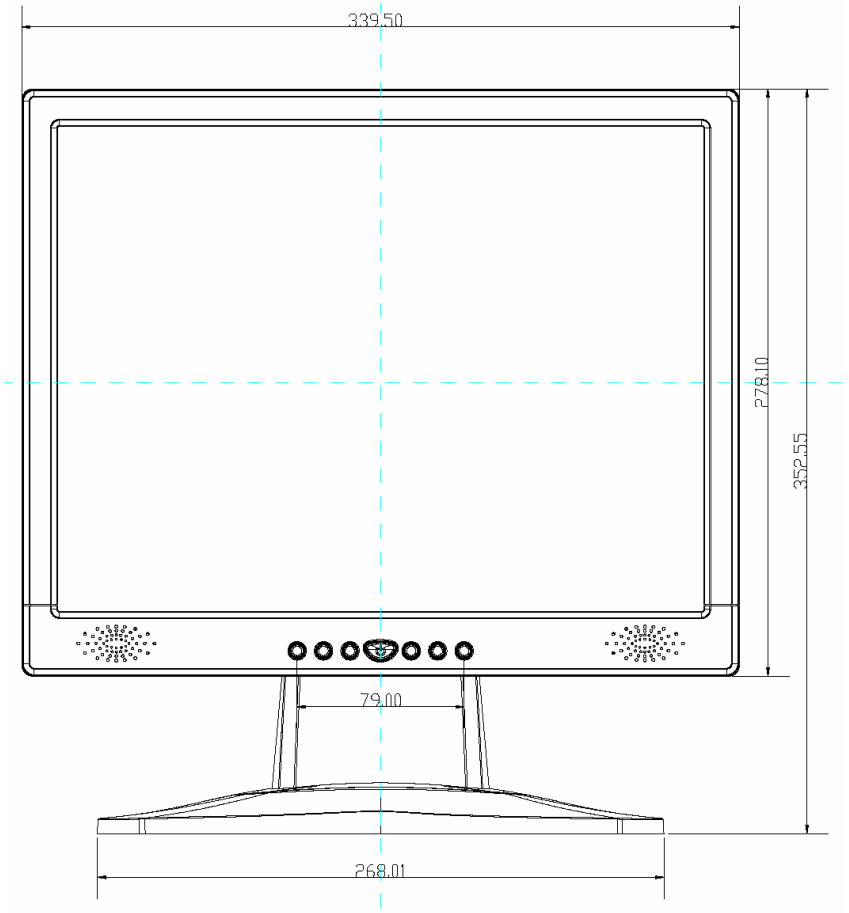
4. LEAKAGE CURRENT HOT CHECK

4-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.
4-2 Connect a 1500 ohm , 10 watt resistor , paralleled by a 0.15uF capacitor between each metallic part and a good earth ground.
4-3 Use an AC voltmeter with 1000 ohm / volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15uF capacitor.
4-4 Move the resistor connection to each exposed metallic part and measure the voltage.
4-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.
4-6 Voltage measured must not exceed 1.5 volt RMS, from any exposed metallic part to the ground. A leakage current tester may be used in the above hot check, in which case any circuit measured must not exceed 1 miliamp. In the case of a measurement exceeding the 1 miliamp value, a rework is required to eliminate the chance of a shock hazard.

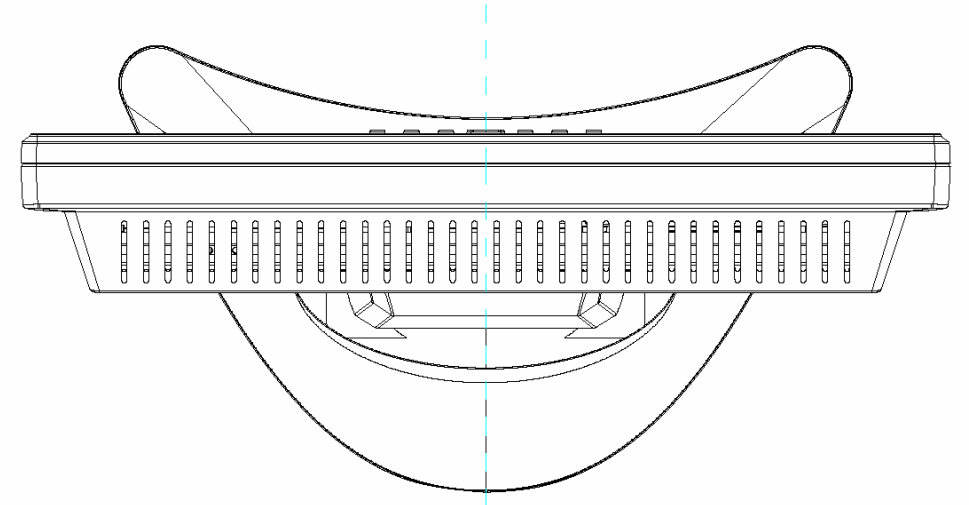


1. DIMENSIONS (Unit:mm)

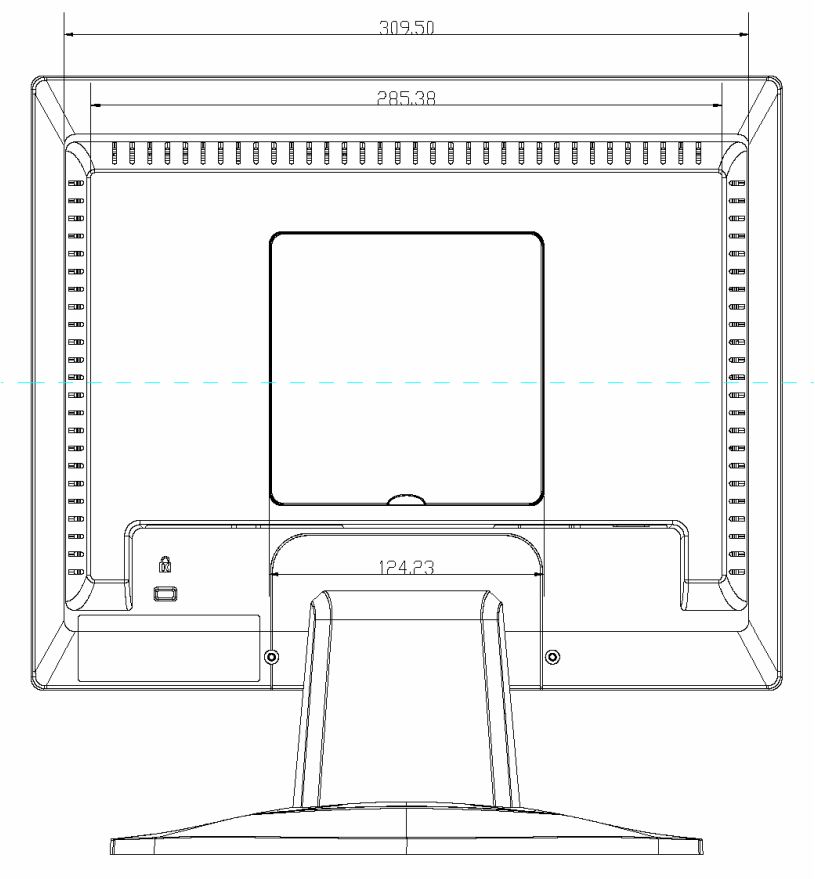
1.1 Front View(ID1)



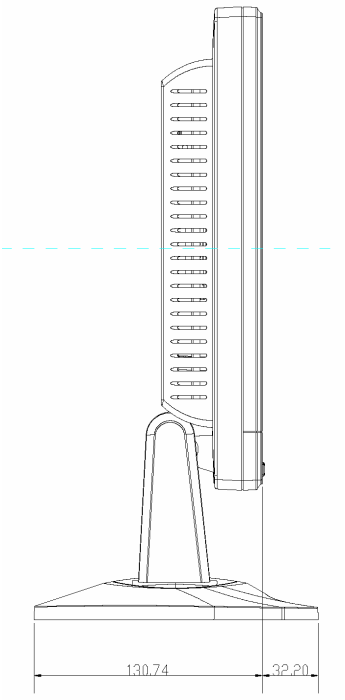
1.2 Top View



1.3 Rear View



1.4 Side View



2. GENERAL INFORMATION

2.1. OUTLINE

This monitor is 15" multi-scan color LCD display with the following features.
OSD (on screen display) control allows easy user adjustment.
Power saving function, which helps saving energy , is also one of the highlights of this model.

2.2. FEATURES

2.2.1 Power Saving

Built in Power Saving function based on VESA-DMPS standard. Power energy shall be saved by controlling the circuit in accordance with power save signal from computer.

2.2.2 OSD (on screen display) function

OSD (5 Languages) function is excellent and new man-machine interface.
Anyone is able to set up the picture as he like through OSD menu.

2.2.3 Self Test function

Self Testing picture comes out by pushing any key in the case of no-connection with computer or power saving operation. This function shows if monitor is alive or not and can be used for self aging test.

2.2.4 Ergonomic design

Low emission design to meet MPR II and TCO

2.2.5 Multi scan with digital technology

8 bit micro controller controls the circuit operation to meet with wide range signal of Fh=31~61 kHz and Fv= 56~75 Hz. So VGA640x400, VGA640x480, SVGA800x60,XGA 1024x768,

2.2.6 Factory preset

The product has 21 memory mode in total . 12 modes are preset and 9 modes are user definable.

2.2.7 Fine dot pitch

LCD panel with a fine dot pitch (Horizontal : 0.297 mm / Vertical : 0.297 mm)

2.2.8 Superior display performance

High contrast : 400 : 1(Typical)
High brightness : 250 cd / m2 (Typical)
Wide view angle : 120 / 90 degrees (H/V)

2.2.9 Special function

VESA DDC2B (Display Data Channel) Compatible

3. SPECIFICATION

3.1. Outline

3.1.1 Front Indication: POWER SW, LED(Green/Amber),UP,Down,LEFT,RIGHT,Set/Auto and MENU key are located on the front panel.

3.1.2 Video signal cable connector, audio line-in receptacle and DC inlet are located on the back side cabinet.

3.1.3 OSD menu includes the following function. CONTRAST, BRIGHTNESS, H.POSITION, V.POSITION COLOR-TEMPERATURE, CLOCK, PHASE, LANGUAGE, VOLUME, POWER-ON-RECALL

3.1.4 CONTRAST and BRIGHTNESS can be directly controlled with UP / Down key.

3.1.5 VOLUME can be controlled with LEFT / RIGHT key.

3.2. MECHANICAL SPECIFICATIONS

3.2.1 Dimension Height : 371 mm (14.7")
Width : 348 mm (13.7")
Depth : 157 mm (7.2")

3.2.2 Net Weight :5.6 kg (12.4 lbs)

3.2.3 Maximum Viewable Area: Diagonal 381mm(15")

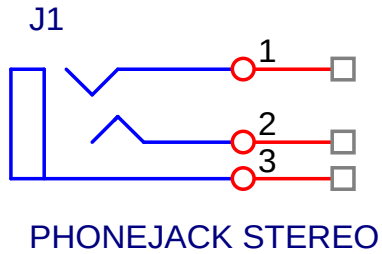
3.3. PANEL SPECIFICATIONS

Part No.	CLAA150XG08
Driver bit of panel	6 bit
Contrast ratio	400:1
Brightness	250 cd/ m2
Pixel pitch	0.297 mm
Response time	Typical 25 ms
View angle (L/R/T/B)	60/60/55/45 degrees
Color coordinate white	x=0.312,y=0.318

3.4. CONNECTORS

3.4.1 AC inlet : CEE22 typed connector

3.4.2 Audio : Line-in receptacle



3.4.3 Attached video signal cable connector x 1

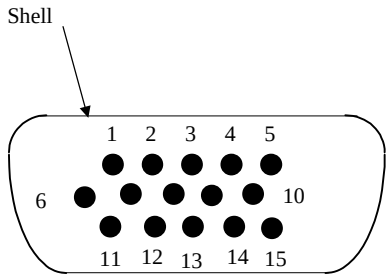


Figure 3.4

Pin	Signal Name
1	Red video
2	Green video
3	Blue video
4	Ground
5	Ground
6	Red ground
7	Green return
8	Blue return
9	N/C
10	Ground
11	Ground
12	SDA (serial data)
13	Hsync
14	Vsync (VCLK)
15	SCL (serial clock)

Signal cable input connector.

3.5. ELECTRICAL SPECIFICATIONS

3.5.1 Standard conditions

Display area (HxV)	304 x 228 mm
Video signal level	0.7 Vpp
Contrast	Max.
Brightness	Max.
Ambient Temperature	25 +/- 5 C degrees
Input voltage	AC 220,50Hz
Warming up time	More than 30 minutes
Display mode	1024 x 768

3.5.2 POWER

3.5.2.1 Power supply

AC-DC adapter

Input voltage	90 - 264 V
Input current	max. 1 Arms
Output voltage	12VDC, 350mA, 3.3V 2A
Frequency range	47 - 63 Hz
Inrush current	Shall be less than the ratings of critical components (including fuse, rectifiers and surge limiting device) for all conditions of line in voltage.

Maximum power consumption: 35 Watts

3.5.2.2 Power Management

The Power Management System complies to TCO 03 standards.

MODE	H-SYNC	V-SYNC	COLOR OF POWER LED	POWER CONSUMPTION	RECOVERY TIME
On	Active	Active	Green	< 35 Watts	-
Off	Inactive	Inactive	Amber	< 1 Watts	< 30 seconds

Remark: In case of “no signal“ Power LED must be amber.
At first power on w/o signal LED will be green + message on screen.

3.5.3 Signal level and input impedance

3.5.3.1 Video Signal level

This LCD display is adjusted at the factory using 0,7 Vp-p Video signal.

3.5.3.2 Sync Signal level

H/V Separate : TTL level

3.5.3.3 Input impedance

Video input : 75 ohms

Sync input : > 1 k ohms

3.5.4 Display Area

Display area : 304 x 228 mm

3.5.5 Preset Timings

The product has 21 memory modes in total. 12 modes are preset and 9 modes are user definable.

Timing	1	2	3	4	5	6	7	8	9	10	11	12
Standard	DOS	VESA	VESA	VESA	VESA	VESA	VESA	VESA	VESA	VESA	Industry	VESA
Data Pixel	640	640	640	640	720	800	800	800	800	1024	1024	1024
Data Line	350	480	480	480	400	600	600	600	600	768	768	768
H-Freq kHz	31.469	31.469	37.861	37.500	31.467	35.156	37.879	48.077	46.875	48.363	56.180	60.023
V-Freq Hz	70.087	59.942	72.809	75.000	70.082	56.250	60.317	72.188	75.000	60.004	69.960	75.029
Pix Rate MHZ	25.175	25.175	31.500	31.500	28.320	36.000	40.000	50.000	49.500	65.000	74.160	78.750
Hor.A [us]	0.318	0.636*	0.508	0.508	0.616	0.667	1.000	1.120	0.323	0.369	0.323	0.203
Hor.B [us]	3.813	3.813	1.270	2.032	3.813	2.000	3.200	2.400	1.616	2.092	2.373	1.219
Hor.C [us]	1.907	1.907*	3.810	3.810	1.907	3.556	2.200	1.280	3.232	2.462	1.294	2.235
Hor.D [us]	25.422	25.422	20.317	20.317	25.442	22.222	20.000	16.000	16.162	15.754	13.810	13.003
Hor.E [us]	31.778	31.778	26.413	26.667	31.778	28.444	26.400	20.800	21.333	20.677	17.800	16.660
Vert.A [ms]	0.191	0.381	0.026	0.027	0.382	0.028	0.026	0.770	0.021	0.062	0.018	0.017
Vert.B [ms]	0.064	0.064	0.079	0.080	0.064	0.057	0.106	0.125	0.064	0.124	0.142	0.050
Vert.C [ms]	1.907	1.048#	0.528	0.427	1.111	0.626	0.026	0.478	0.448	0.600	0.463	0.466
Vert.D [ms]	11.122	15.253	12.678	12.800	12.711	17.067	15.840	12.480	12.800	15.880	13.670	12.795
Vert.E [ms]	14.268	16.683	13.735	13.333	14.268	17.778	16.579	13.853	13.333	16.666	14.293	13.328
Sync.Pol.	+/-	- / -	- / -	- / -	-/+	+ / +	+ / +	+ / +	+ / +	- /-	+ / +	+ / +

Note: *Indicates horizontal front / back porch includes borders

# Indicates vertical front / back porch includes borders

3.5.6 General performance

3.5.6.1 Maximum pixel clock

78.85 MHz

3.5.6.2 Maximum luminance

Test conditions: 100% all white pattern, brightness set to Maximum

typical: 250 cd/m2

min : 200cd/m2

3.5.6.3 Brightness variation

Value	75 % Variation (C / A x 100)
Conditions	Display image: Full white Brightness : Maximum Contrast : Maximum A: Luminance at center position C: Luminance at position of lowest brightness

3.5.6.4 Contrast ratio (CR)

Value	CR= B / A
Conditions	Contrast : Maximum Brightness : max B: Full white pattern A: Full black pattern

3.6. ENVIRONMENTS

The environmental conditions are in accordance to IEC 721

Operating:

Temperature:	5°C - +40° C
Humidity:	20% - 80%
Height:	3000 m
	Air pressure:
	700 - 1060 mbar

Storage (unpacked)

Temperature:	-20°C - +60° C
Humidity:	10% - 85%
Height:	3000 m
Air pressure:	700 - 1060 mbar

Transport (packed)

Temperature:	-30°C - +60° C
Humidity:	5% - 95%
Height:	12000 m

3.7. REGULATORY STANDARDS

3.7.1 Safety standards

This monitor applies to various safety & EMI standards May refer to the logo label

3.7.2 EMC standards

FCC part 15,subpart B , class-B (EMV) CE marking

3.8. OTHERS

TCO03,

3.9. P0WER CORD

Northern Hemisphere Version : UL / CSA approved power cord.

European : VDE approved power cord.

3.10. SIGNAL CABLE

Signal cable with Mini D-Sub 15P connectors. Length : 1.8 meter.

3.11. RELIABILITY

> 30000hrs (demonstrated MTBF)

4. THEORY OF OPERATION

This section describes the function of the LCD monitor per functional block.
L5EP monitor includes MB board(including audio board function inside), inverter board, adapter and button board.

4.1 MB BOARD

The MB board is a four-layer, single-landed design with ground and internal planes provided. DC power from the power adapter enter the board through DC jack. Other connectors on the board are for inverter, and button board .The VGA cable is a signal cable that contains video signal, sync signal and DDC signal from PC VGA adapter.
The system board consists of 3 functional areas : flat panel controller, micro-controller , power regulator

4.1.1 Flat panel controller…… MST8016 (U2)

The heart of the system board is MST8016. The MST8016 is a graphics processing IC for LCD monitor. It provides all key IC functions required for LCD panel. On-chip functions include a high-speed triple-ADC, PLL, high scaling engine, and OSD controller.

a) Clock Generation :
Crystal Input Clock (TCLK and XTAL). This is the input pair to an internal crystal oscillator and corresponding logic. A 14.318 MHz crystal is recommended.

b) Hardware Reset (Pin 155)
Hardware Reset signal is generated by micro-controller (U4, pin 36).It assert a reset signal at least 100 ms.

c) Analog to Digital Converter
The MST8016 chip has three ADC's (analog-to-digital converters), one for each color (red, green and blue)
The analog RGB signals are connected to MST8016 as described below

Pin Name	Pin Number
Red +	59
Red -	60
Green +	53
Green -	54
Blue +	47
Blue -	48

d) Panel Power Sequencing (VDDCTRL, INVCTRL) (Pin20~21)
The MCU has two dedicated outputs VDDCTRL1, 2 and INVCTRL (Pin9, 16 and Pin36) to control LCD power sequencing once data and control signals are stable.

e) Panel interface (Pin 66~137)
The MST8016 driver interface is highly programmable. It supports dual bus / dual port for XGA drivers.

4.1.2 Microcontroller MT312 (U4)

The MT312 is a microcontroller serves as the system microcontroller.That is , it programs the MST8016 and manages other devices in the system such as the keypad, the backlight, LED, audio and non-volatile RAM.using general purpose input/output (I/O) pins.

Pin No	Pin Name	Pin Usage
20	P1.2(SDA)	Data signal for serial communication
21	P1.3 (SCL)	Clock signal for serial communication
26	P6.1 (PWR KEY)	For On/Off power button
19	P3.2 (INT)	Connect to MST8016
9, 16	P6.3, P6.2	For Panel power control
36	P4.0 (INVCTRL)	For inverter on/off control
37	P4.1 (MUTE)	Control audio volume to mute
41	P5.4(LED Green)	Control LED green
42	P5.3 (LED Red)	Control LED red
25	P1.7(DSUB_5V)	For VGA signal check
27	P6.0 (KEY in)	Control button input
28	P3.1 (VGA SDA)	EDID data connect to VGA port
29	P3.5 (VGA SCL)	EDID clock connect to VGA port
22	P1.4 (Reset)	Provide Reset signal for MST8016

4.1.3 Power reference AIC1739 (Q3)

The AIC1739 is a 2.5V voltage provider. It could support maximum 100mA current capability. The 2.5V reference was for scaler MST8016 reference. The voltage was very important for this all the function that MVZ have.

4.2 Inverter/Power/Audio Board

This is a specific inverter/Power/Audio module for L5TD monitor with backlight/EE parts/audio function.

4.2.1 Inverter function

The inverter converters 12 Vdc to drive two cold cathode fluorescence tubes. Electrical specification described as below.

INPUT	Rated Input Voltage	12Vdc (L5EP)
	Maximum Input Voltage	11.4~12.6 Vdc
	Input Current	<1. 2A
	Off state Input Power	< 0.1 W
	On / Off Voltage	20~98 % duty cycle
OUTPUT	Rated Output Strike-on Voltage	1100 Vrms
	Rated Output Voltage	675 Vrms at 7.5 mA
	Rated Output Frequency	50~60KHz
	Rate Output Current per tube	7.5 mA

4.2.2 Adapter

This is a general purpose AC / DC adapter which converter 90~240 Vac to a stabilized DC voltage 12 V with rated output current of 3A . Electrical specification described as below

INPUT	Rated Input Voltage	100~240 Vac , 50/60 Hz
	Operation Input Voltage	90~264 Vac, 47~63 Hz
	Input Current	< 1.0A
	Inrush Current (Cold Start)	< 50A @ all input range
	Standby Input Power	< 1.0 W (3.3V 30mA)
OUTPUT	Rated Output Voltage	12 Vdc and 3.3Vdc
	Output Voltage Regulation	+ 5 / -5 % and
	Output Ripple and Noise	< 120 and 100 mVp-p
	Rate Output Current	< 250mA and 2.0A
	Turn-on Delay	< 1 Second

4.2.3 Audio amplifier TDA7496

The TDA7496 on the power board is a 2 channel audio power amplifier capable of delivering 1W of continuous average power to an 8 ohms with less than 10% (THD) from a 12 V power supply.

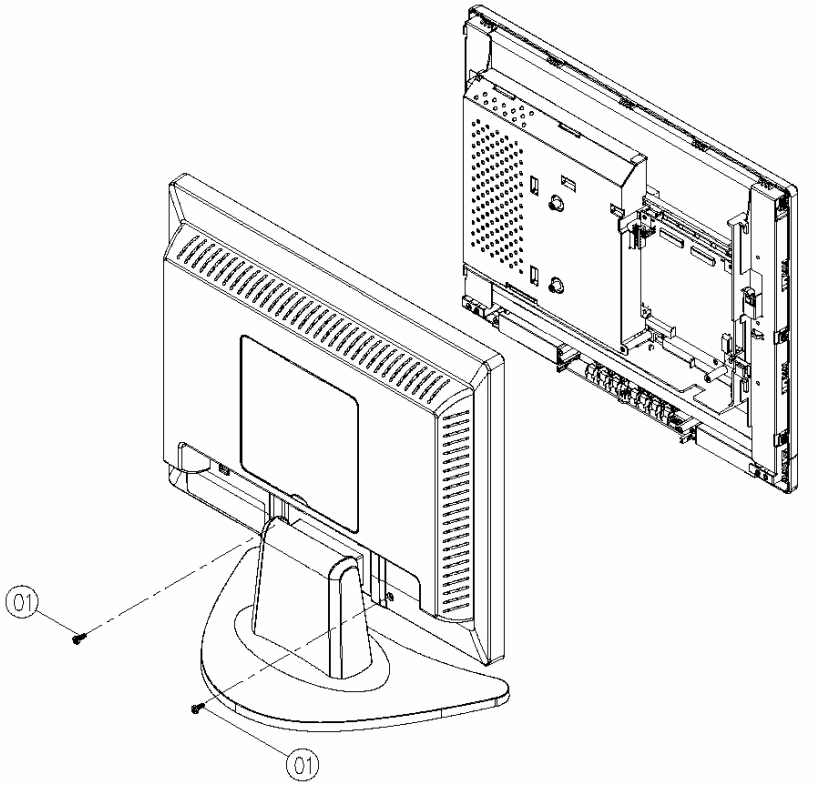
TDA7496 can directly drive 8 ohms speaker , does not require output coupling capacitor, bootstrap capacitor ,or snubber network. Audio line-in are feed into pin 4,8 of the AN7522. The output power is controlled by the DC voltage of pin 39 from MTV312 I / O port.

5. DISASSEMBLY INSTRUCTIONS

1.Stand and & rear cover removal

1) remove four large screw "1" from the rear cover

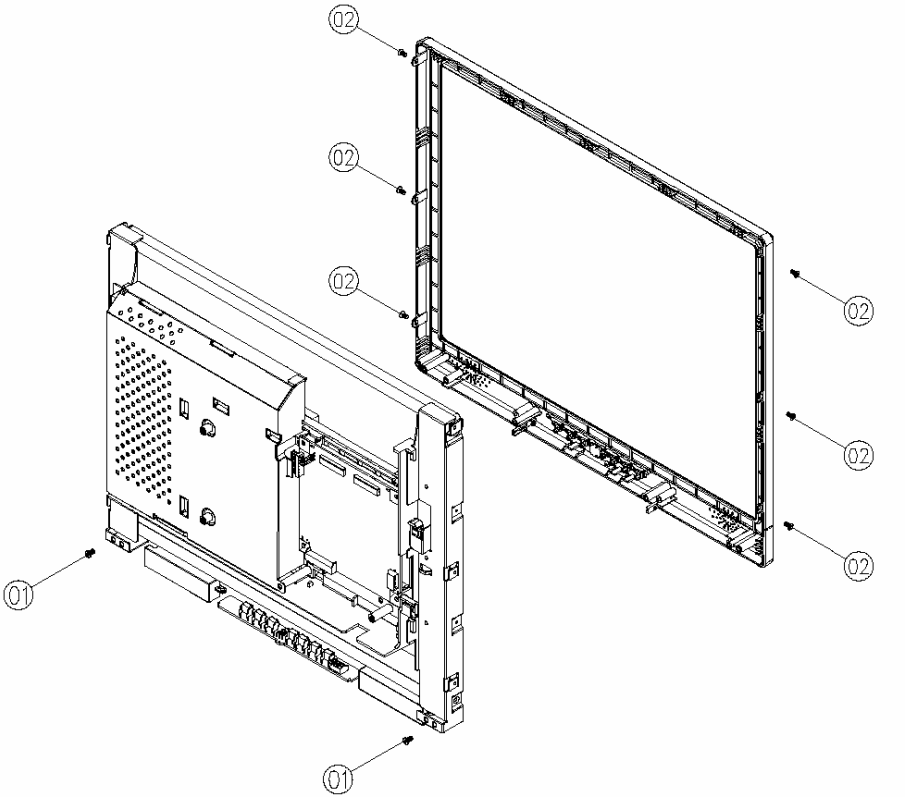
2) remove the back cover



2.Bezel removal

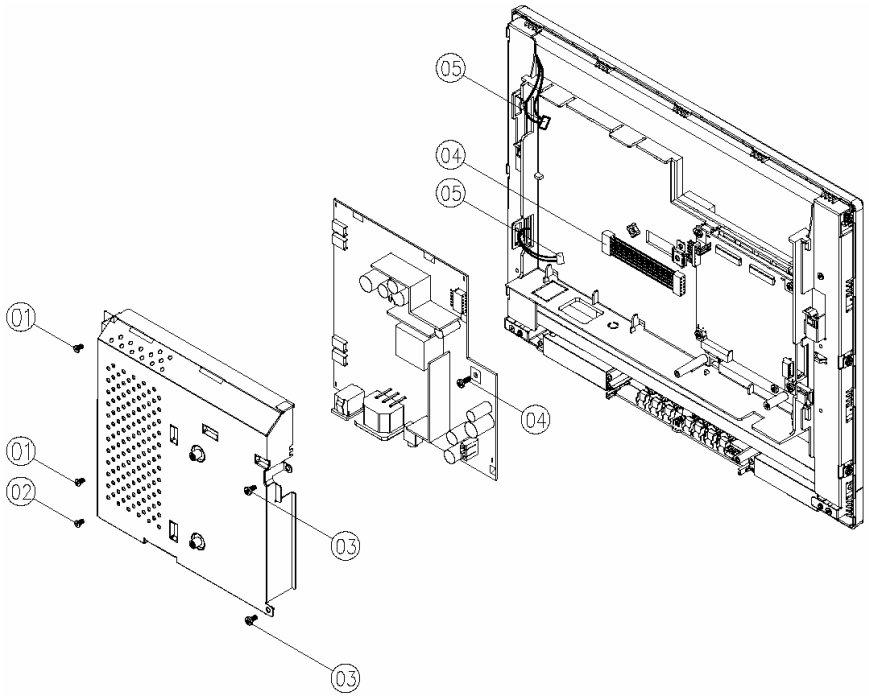
1) remove screw "1" & “2” from the Bezel

2) remove the bezel



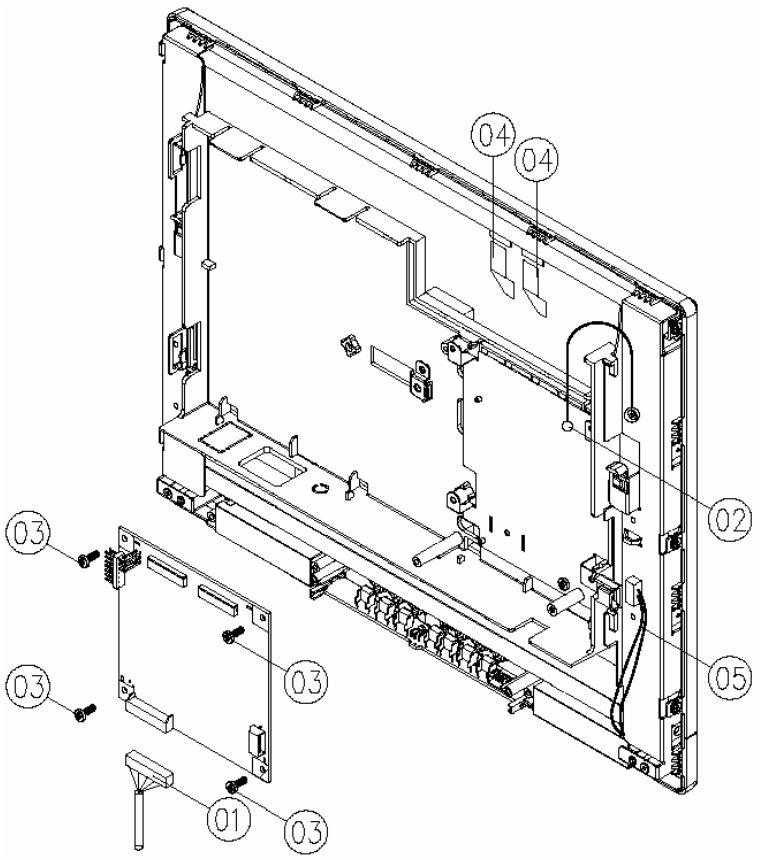
3. Inverter cover & Inverter board removal

1) remove two screw "1", “2” & “3”
2) remove the shield cover
3) remove two screw "4"
4) remove cable 4 & 5 then remove Power/Inv board

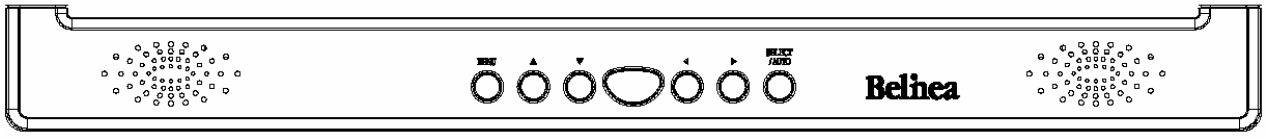


4. AD board removal

1) remove cables 1, 4 & 5
2) remove screw “2” & “3”
3) remove the AD board



6. CONTROL LOCATION



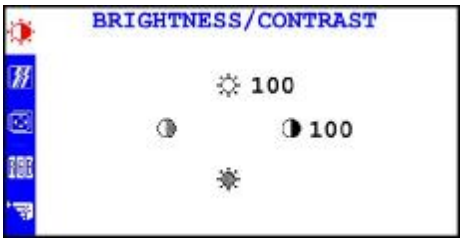
Button Define			
1	MENU	OSD Menu	Trigger OSD Main Menu / Clear OSD
2	△	UP	1. Select OSD Main Menu Item 2. Trigger Brightness/Contrast Menu.
3	▽	DOWN	1. Select OSD Main Menu Item 2. Trigger Brightness/Contrast Menu.
4	⏻	POWER	Switch Power ON/OFF
5	◁	LEFT	1. Decrease Menu Item value 2. Trigger Volume Menu.
6	▷	RIGHT	1. Increase Menu Item value 2. Trigger Volume Menu.
7	SELECT/AUTO	SELECT/ AUTO	1. Switch OSD Main Menu focus status. 2. Perform Auto configuration.

LED Status

Color	*Status Description*
Green	Normal status
Amber	Enter Sleep Mode status or use "Power + Auto" key enter factory mode

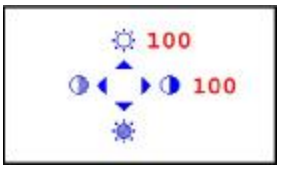
Dialog Overview

OSD Main Menu



When user press the Menu key under none OSD status will trigger this menu appear for detail parameters adjust. This menu will display about 45 seconds if no one press other key, otherwise will refresh display time length.

Brightness/Contrast Menu

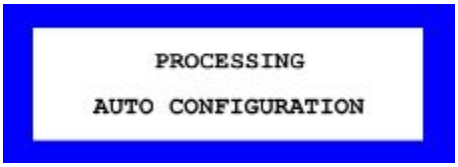


When user press the Up or Down keys under none OSD status will trigger this menu appear for Brightness and Contrast adjust. This menu will display about 45 seconds.

Volume Menu

When user press the Left or Right keys under none OSD status will trigger this menu appear for Volume adjust. Use the Left & Right keys adjust the volume value, and use the Up & Down keys switch the Mute status. This menu will display about 45 seconds.

Auto Configuration



When user press the select/Auto key under none OSD status will trigger this dialog appear and perform Auto Configuration procedure.

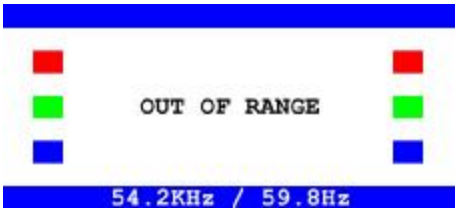
Mode Information

When Display timing changed this dialog will appear about 5 seconds. And this feature only enable when "Information" indicate On in OSD's other page of main menu.

No Signal

When user not support the video signal from the cable this dialog will appear about 20 seconds. And then enter the Sleep mode. One special case was in factory mode, the display time length will become 5 seconds for testing the power consumer.

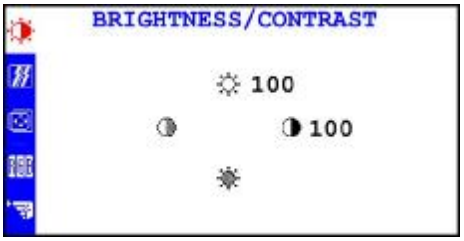
Out Of Range



When user input the video signal out of spec this dialog will appear about 20 seconds. And then enter the Sleep mode.

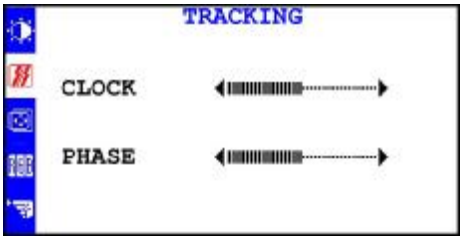
OSD Main Menu

Brightness & Contrast Adjustment



Brightness (Up&Down):
Adjust the brightness of the display.
Contrast (Left&Right):
Adjust the difference between the light and dark areas.

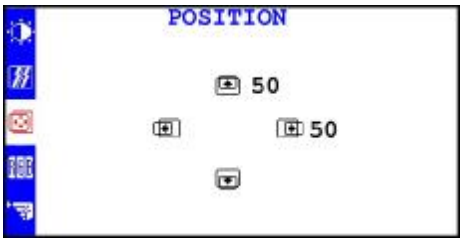
Tracking Adjustment



CLOCK:
Adjust to minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.

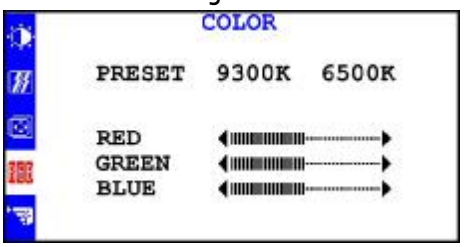
PHASE:
Adjust to remove any horizontal distortion, and clear or sharpen the image of characters.

Position Adjustment



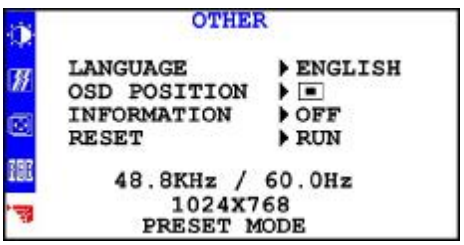
V-Position:
Adjust the vertical position of the picture.
H-Position:
Adjust the horizontal position of the picture.

Color Adjustment



There are four items for color adjustment:
9300K: Bluish white
6500K: Reddish white
User defined:
Red, Green, Blue. Adjust to set your own color level.

Other



LANGUAGE:

Multi- Language selection

OSD POSITION:

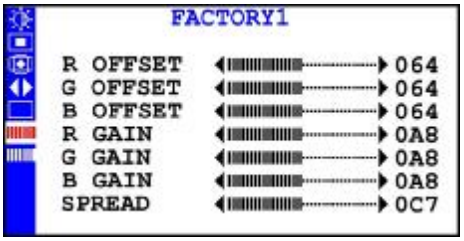
Adjust the OSD window position on the screen.

INFORMATION:

Display Information Dialog or not when input timing changed.

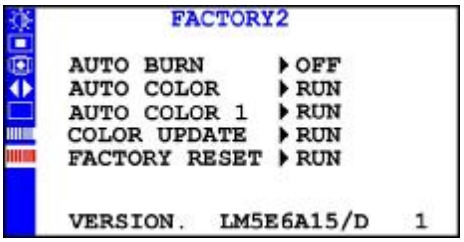
RESET: Recall to factory settings.

Factory1 Adjustment



This page only visible in factory mode
R,G,B OFFSET :
Adjust current RGB cut off level
R,G,B GAIN :
Adjust current RGB Driver value.
SPREAD :
Adjust chip set internal frequency spread effect for EMI testing.

Factory2 Adjustment



This page only visible in factory mode
AUTO BURN :
Use the chip set internal pattern for hot running monitor panel and inverter.
AUTO COLOR :
Perform Auto Balance measurement .
AUTO COLOR 1 :
Perform Auto Balance measurement by chip set internal signal. And reference these values to initial all other color temperature detail parameters.
COLOR UPDATE :
Force presently R,G,B offset and gain parameters update to currently temperature memory address.

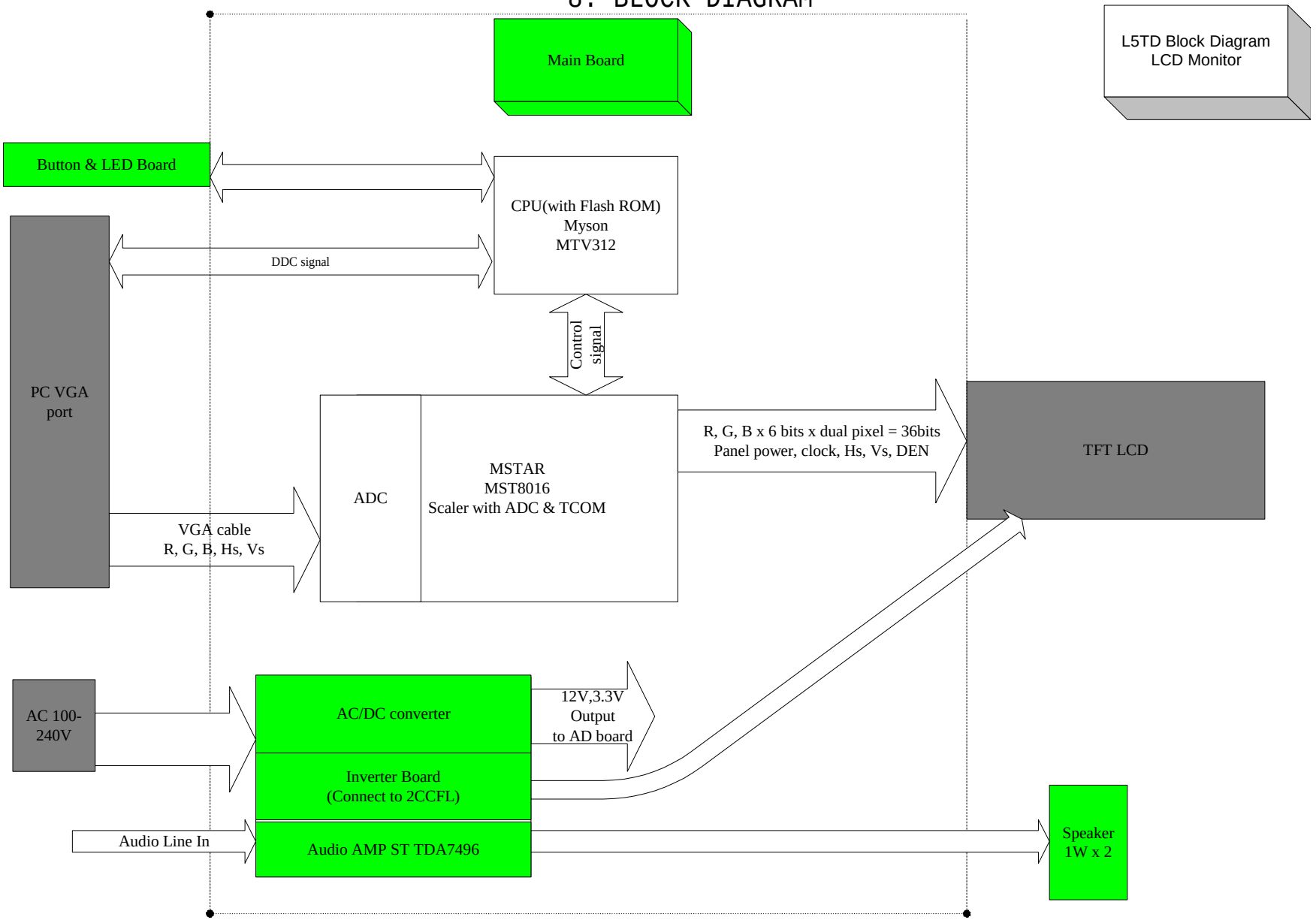
FACTORY RESET :
Recall to factory setting and power off immediately.

VERSION :
Display F/W version and panel vender and DDC serial no.
/A : LG panel
/B : CPT panel
/C : Hanstar panel
/D : Sharp panel

7. NECESSARY EQUIPMENT LIST

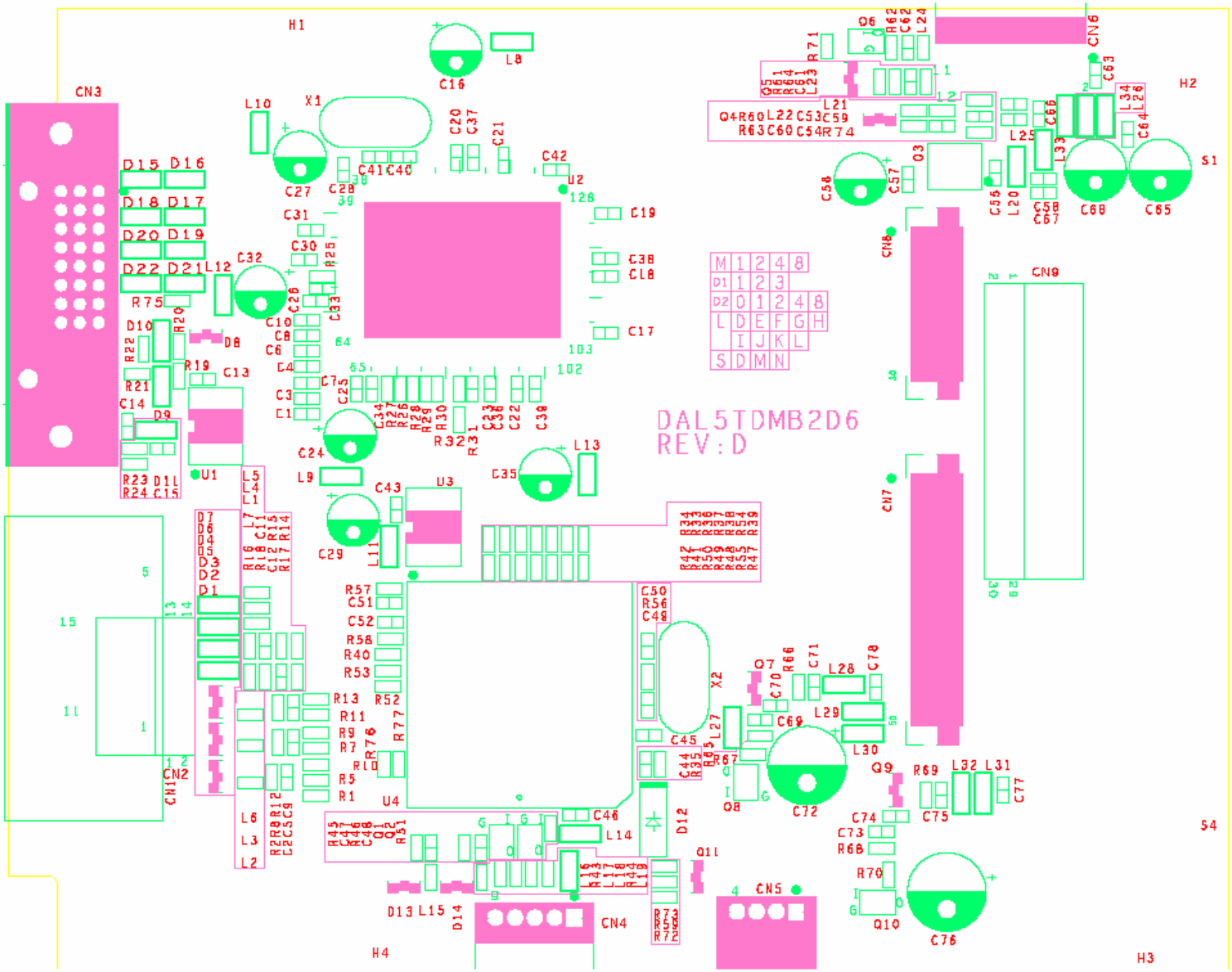
	Item
1	Personal Computer with Windows 98/Me/XP
2	Luminance Meter Minolta CA 110
3	Video Generator : Chroma 2000,2135,2250 or equivalent like test program(Display Mate)
4	Color Analyzer : Minolta CA110 , Chroma or equivalent
5	Watt / Power Meter
6	10 Times Magnifier
7	Multimeter
8	Oscilloscope

8. BLOCK DIAGRAM

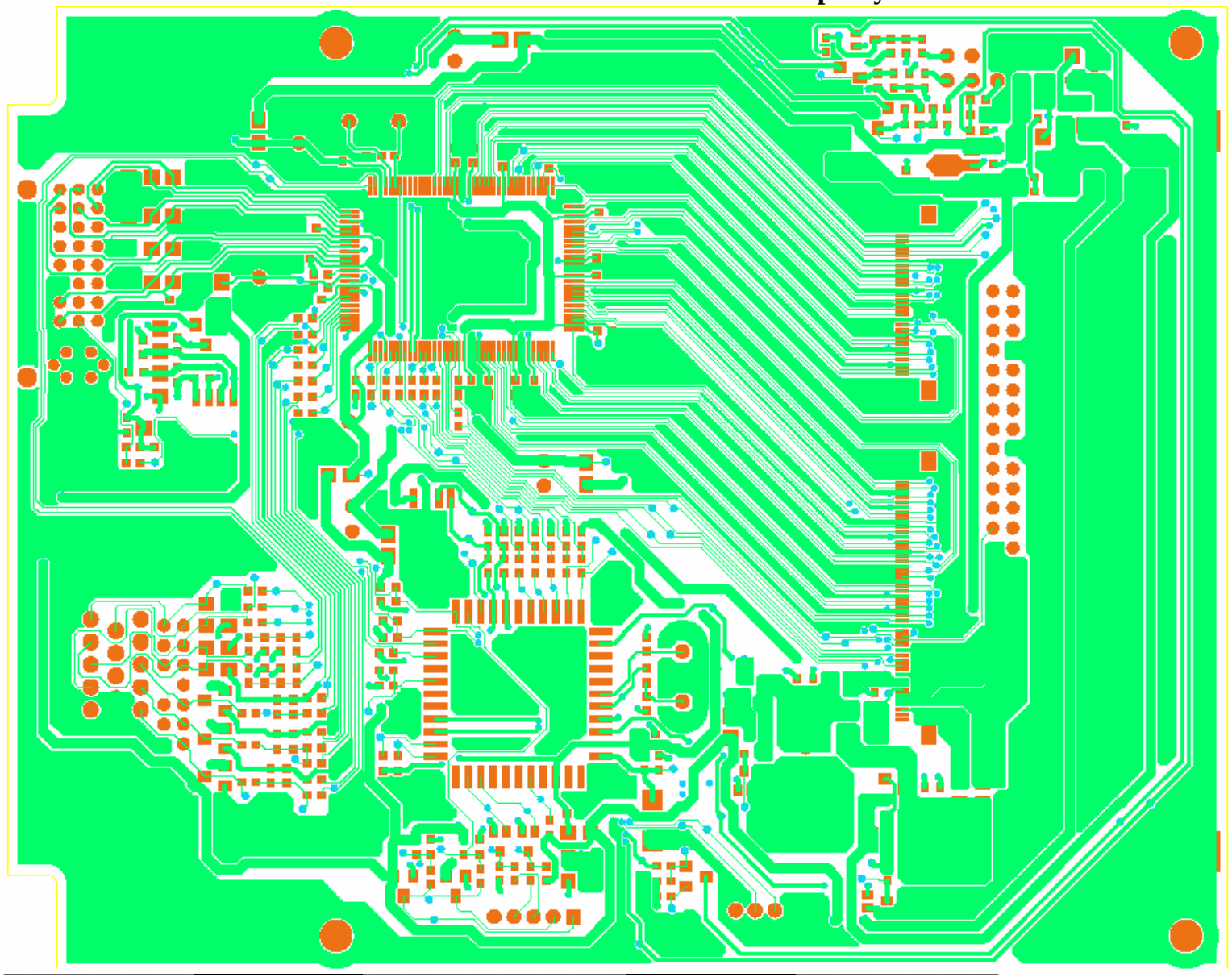


9. CONDUCTOR VIEW

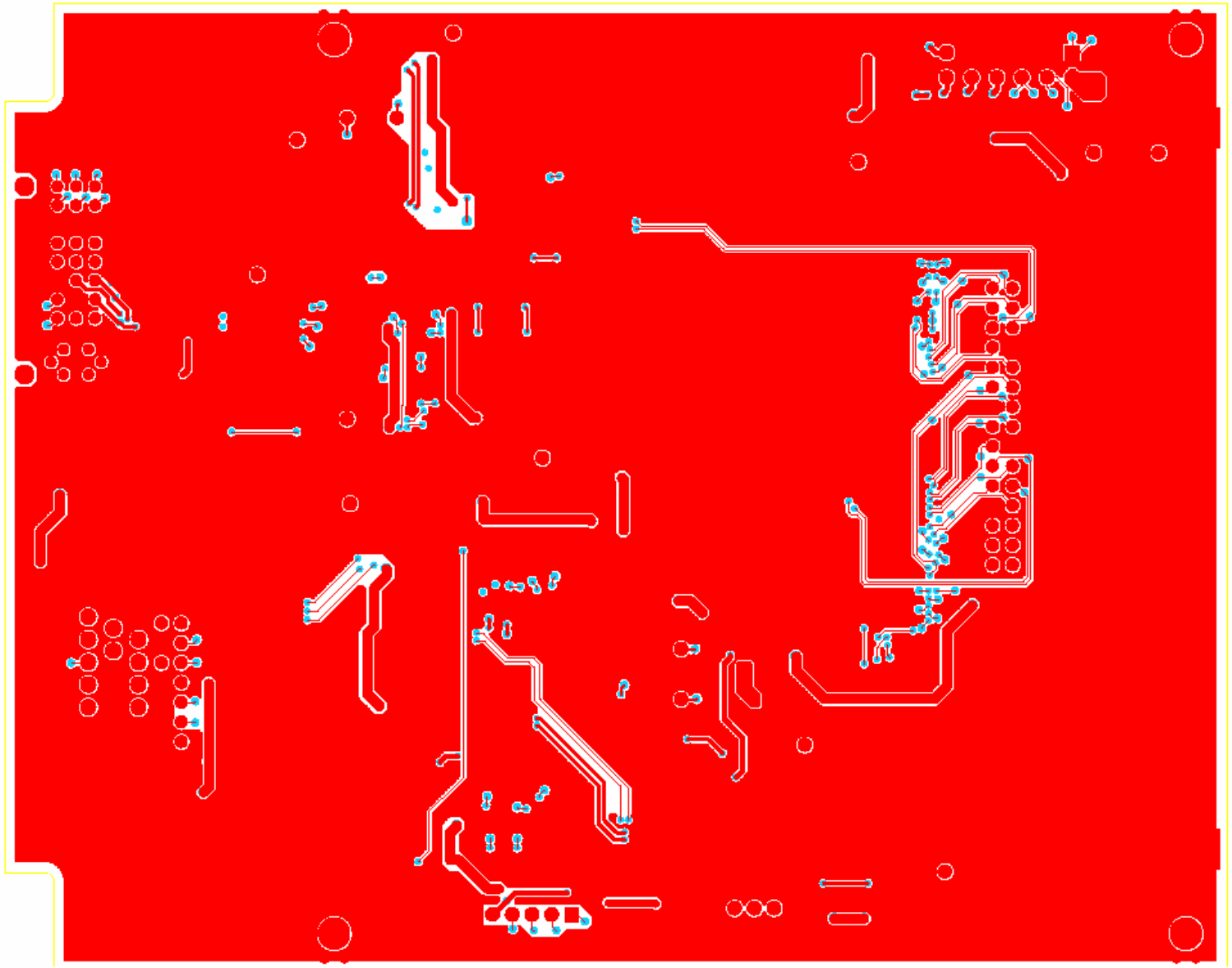
Main Board Silkscreen Top



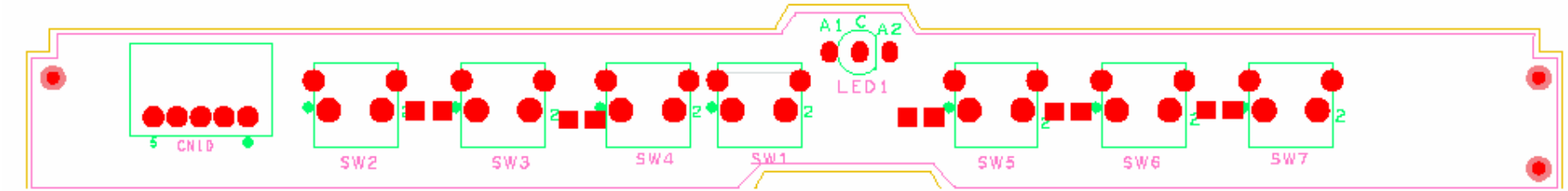
Main Board Top Layer



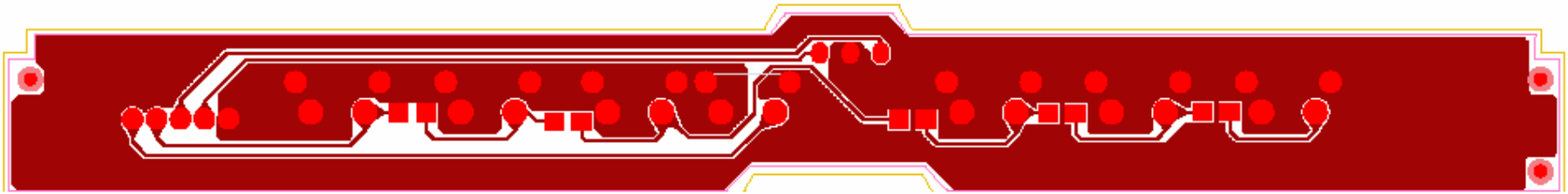
Main Board Button Layer



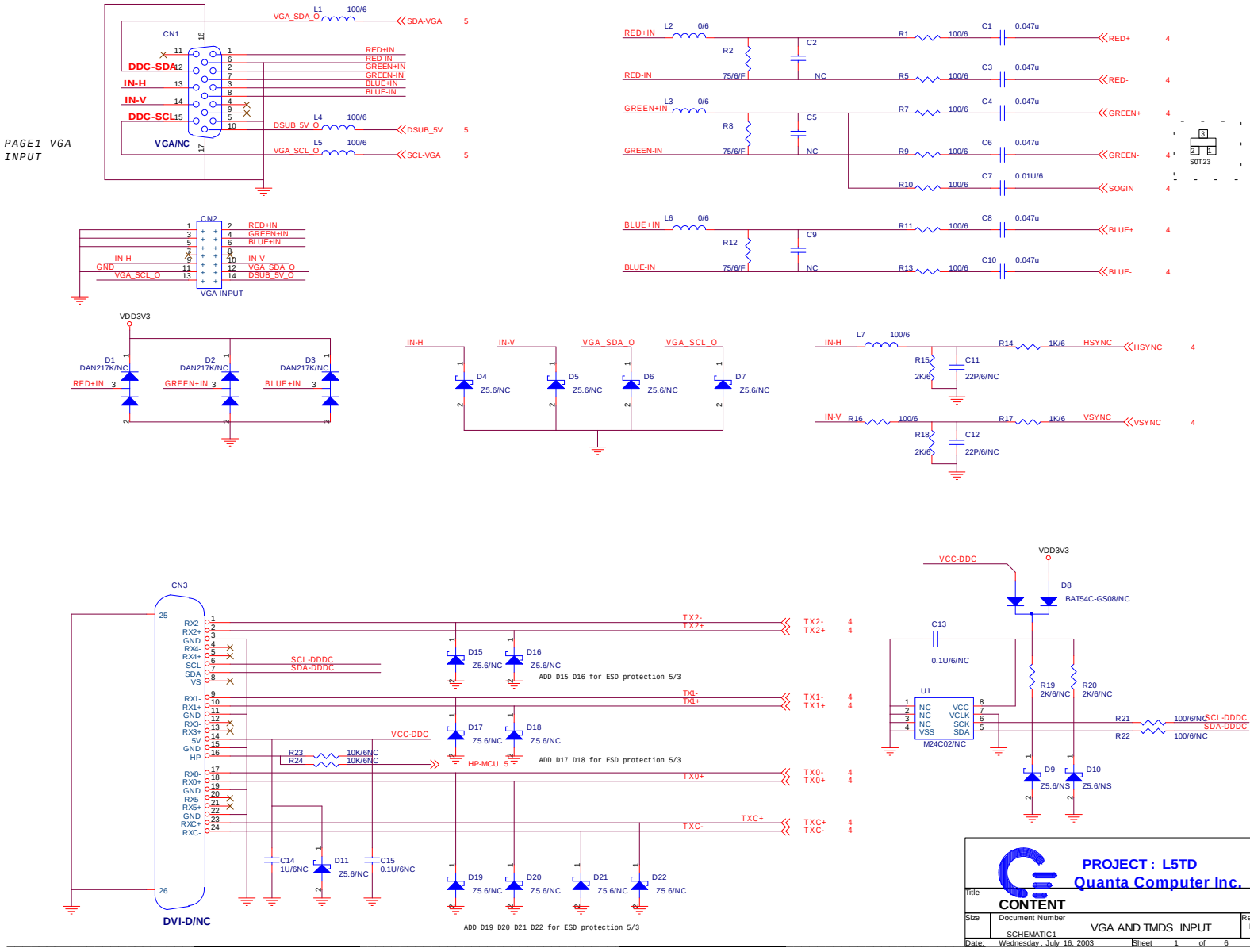
Button Board Silkscreen

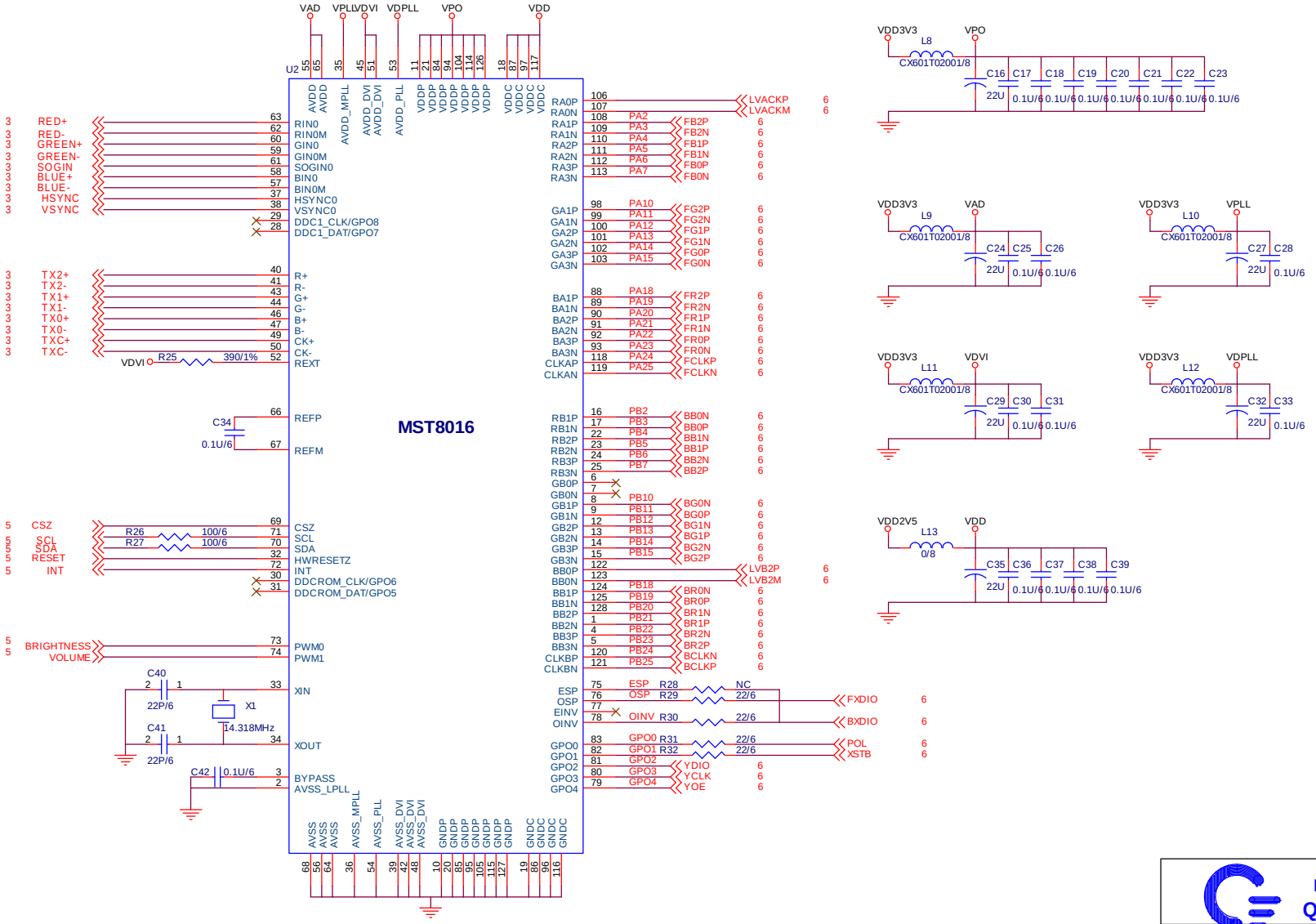


Button Board Layer Bottom



10. SCHEMATIC DIAGRAM Main Board



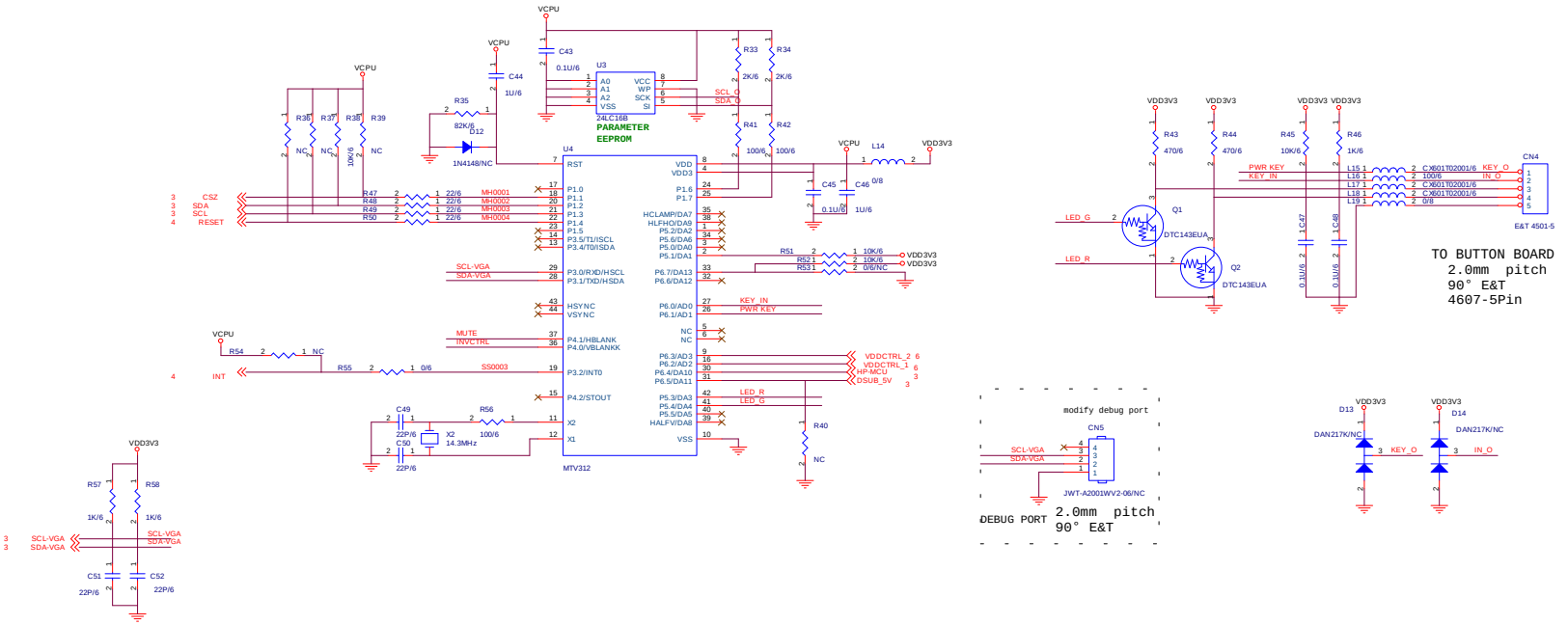


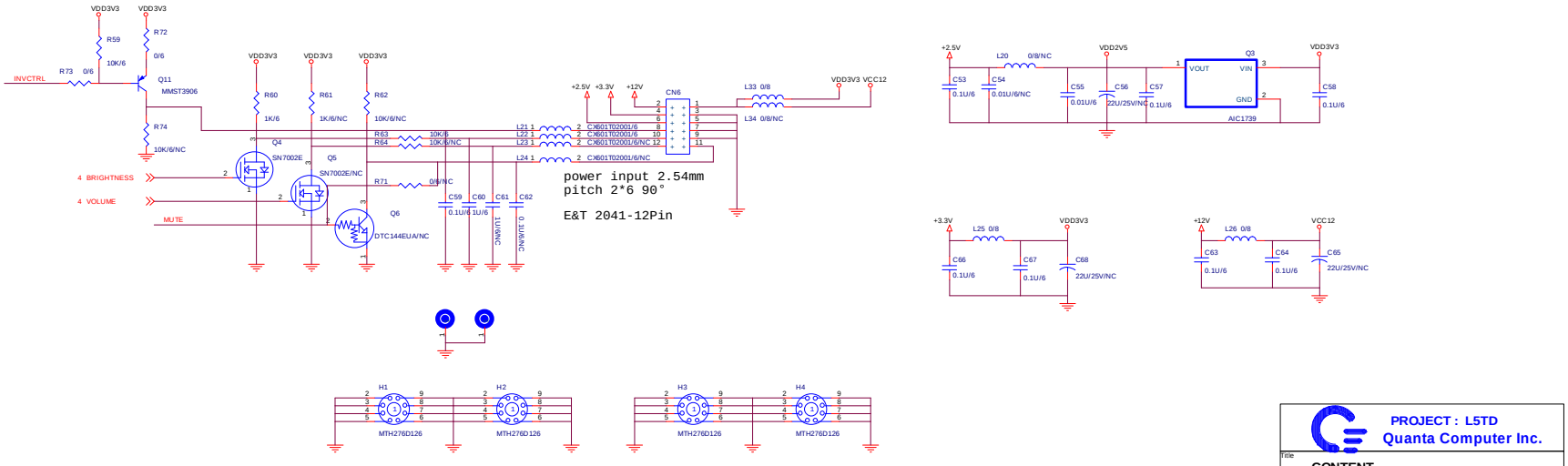
PROJECT : L5TD
Quanta Computer Inc.

Title: CONTENT

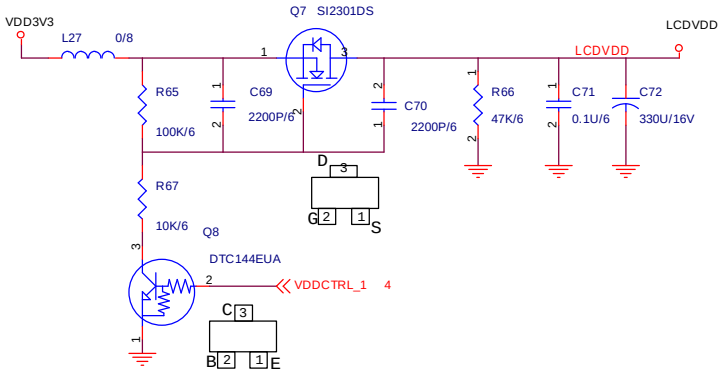
Size	Document Number	Rev
	SCHEMATIC1 MST8036/8136	D

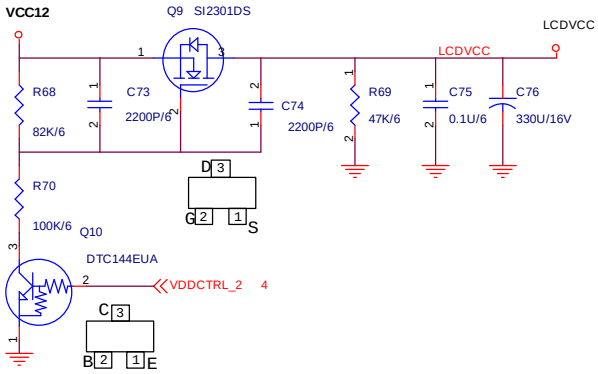
Date: Wednesday, July 16, 2003 Sheet 4 of 6

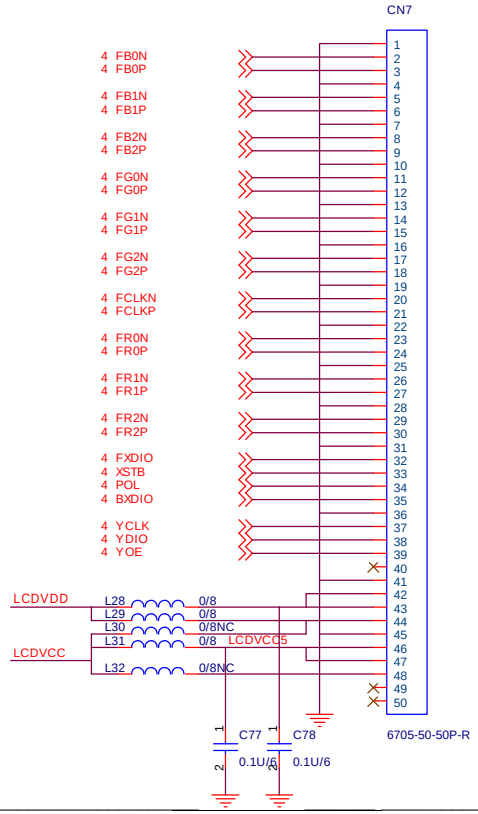


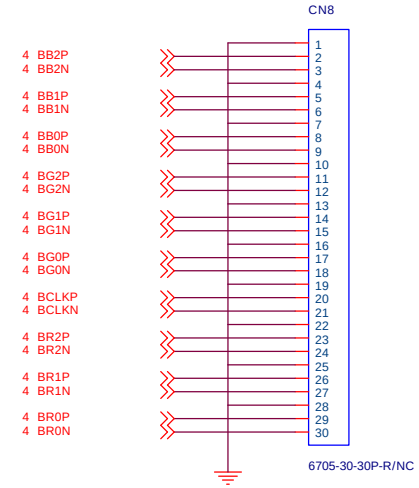


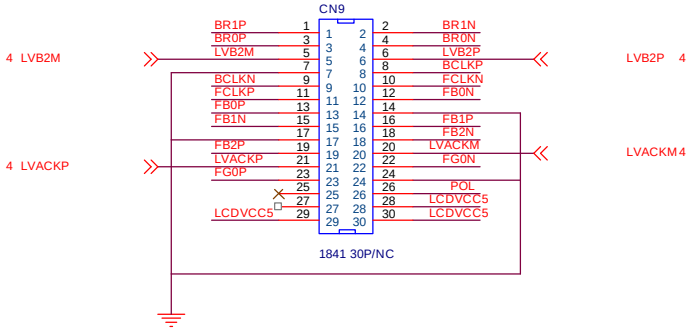
PROJECT : L5TD
Quanta Computer Inc.
Title: CONTENT
Size: Document Number: SCHEMATIC1 — MCU AND POWER — Rev D
Date: Wednesday, July 16, 2003 Sheet 5 of 6











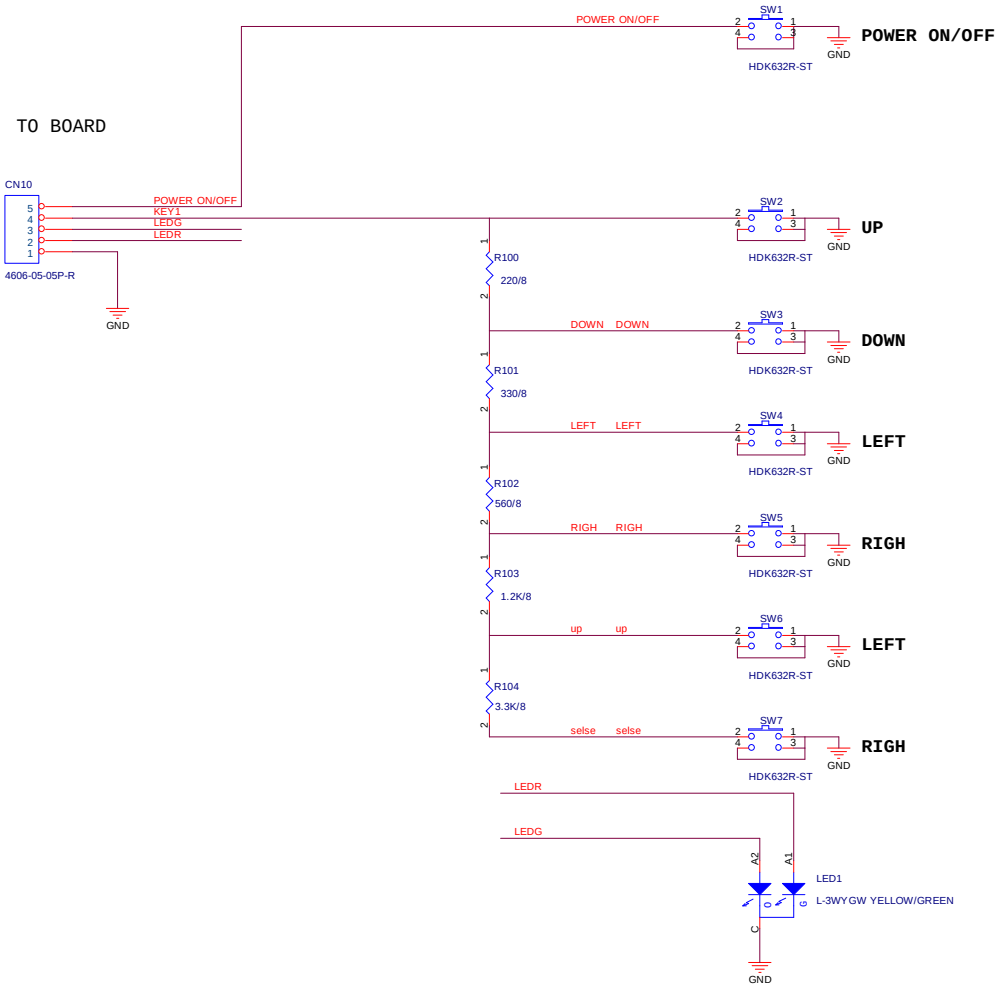
PROJECT : L5TD
Quanta Computer Inc.

Title: CONTENT

Size	Document Number	Rev
	SCHEMATIC1 PANEL	D

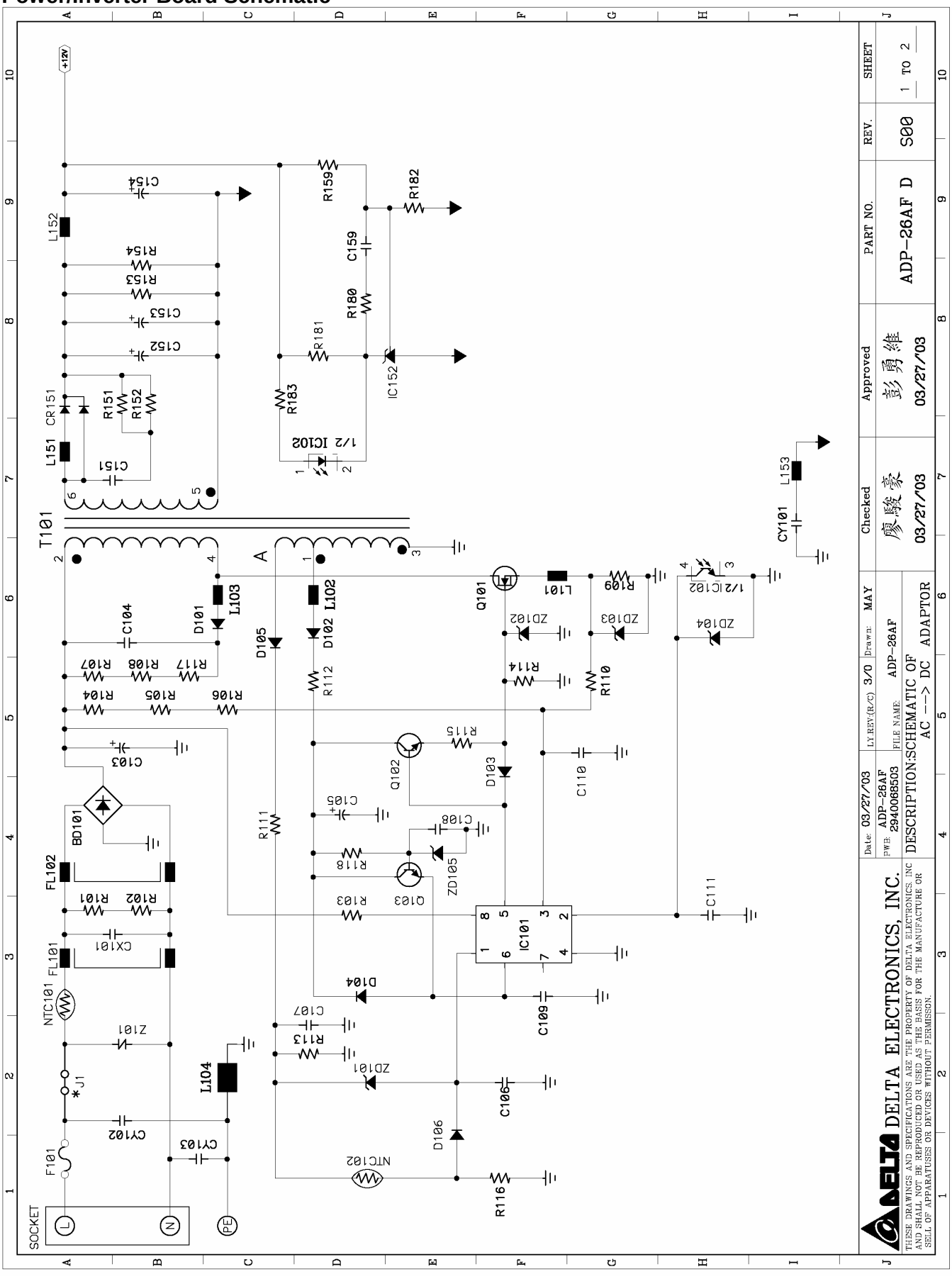
Date: Wednesday, July 16, 2003 Sheet 6 of 6

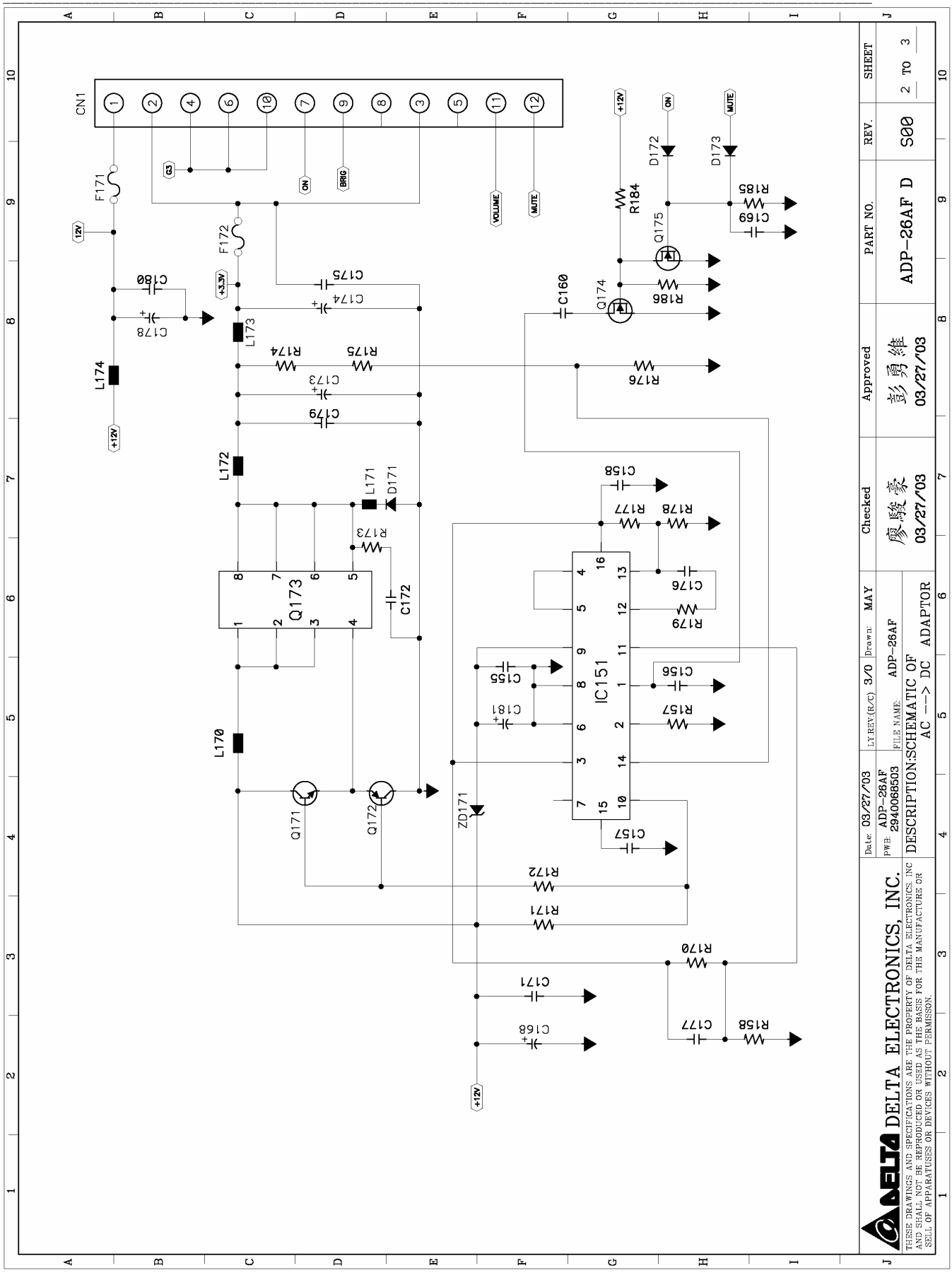
Button Board

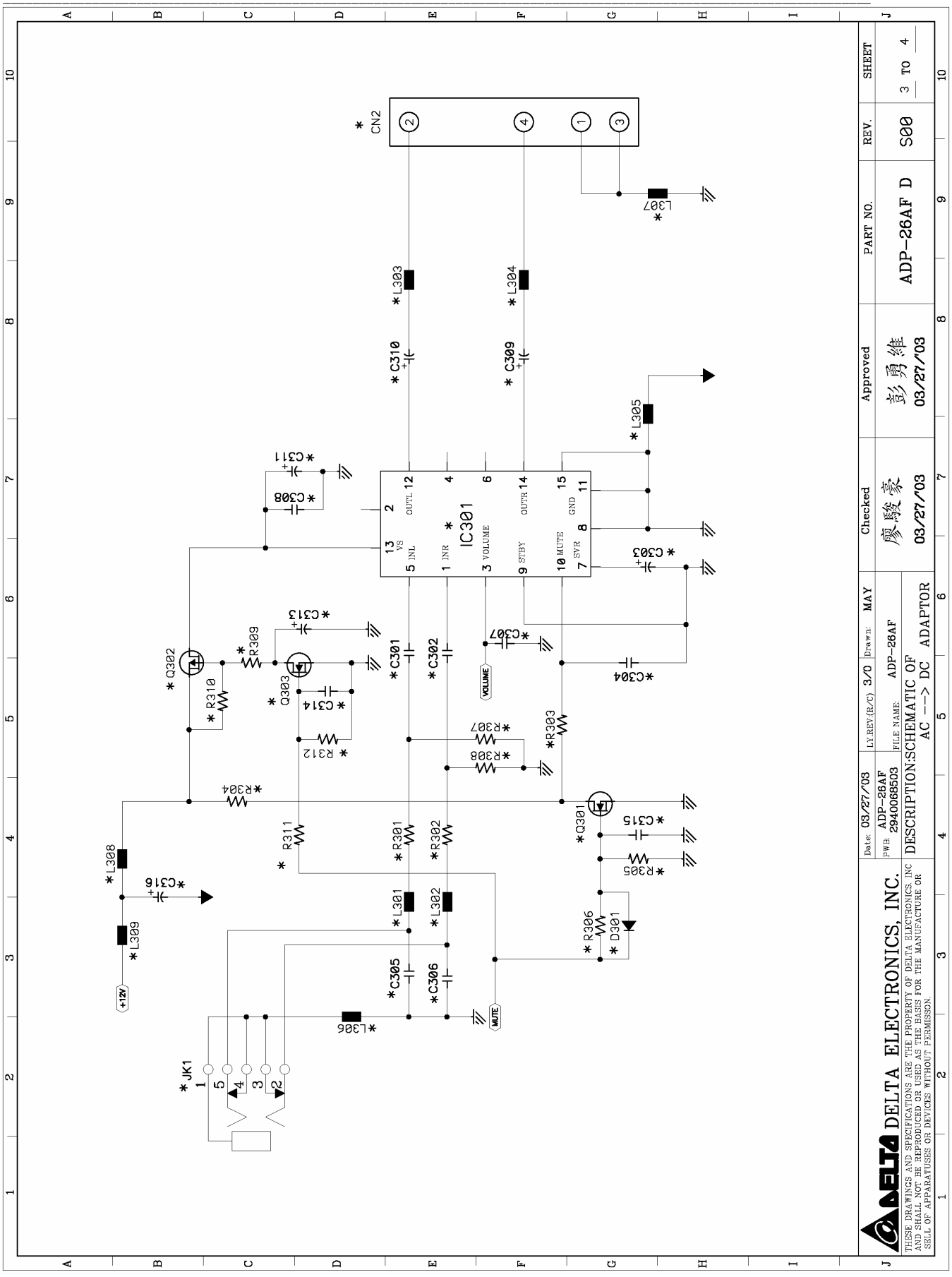


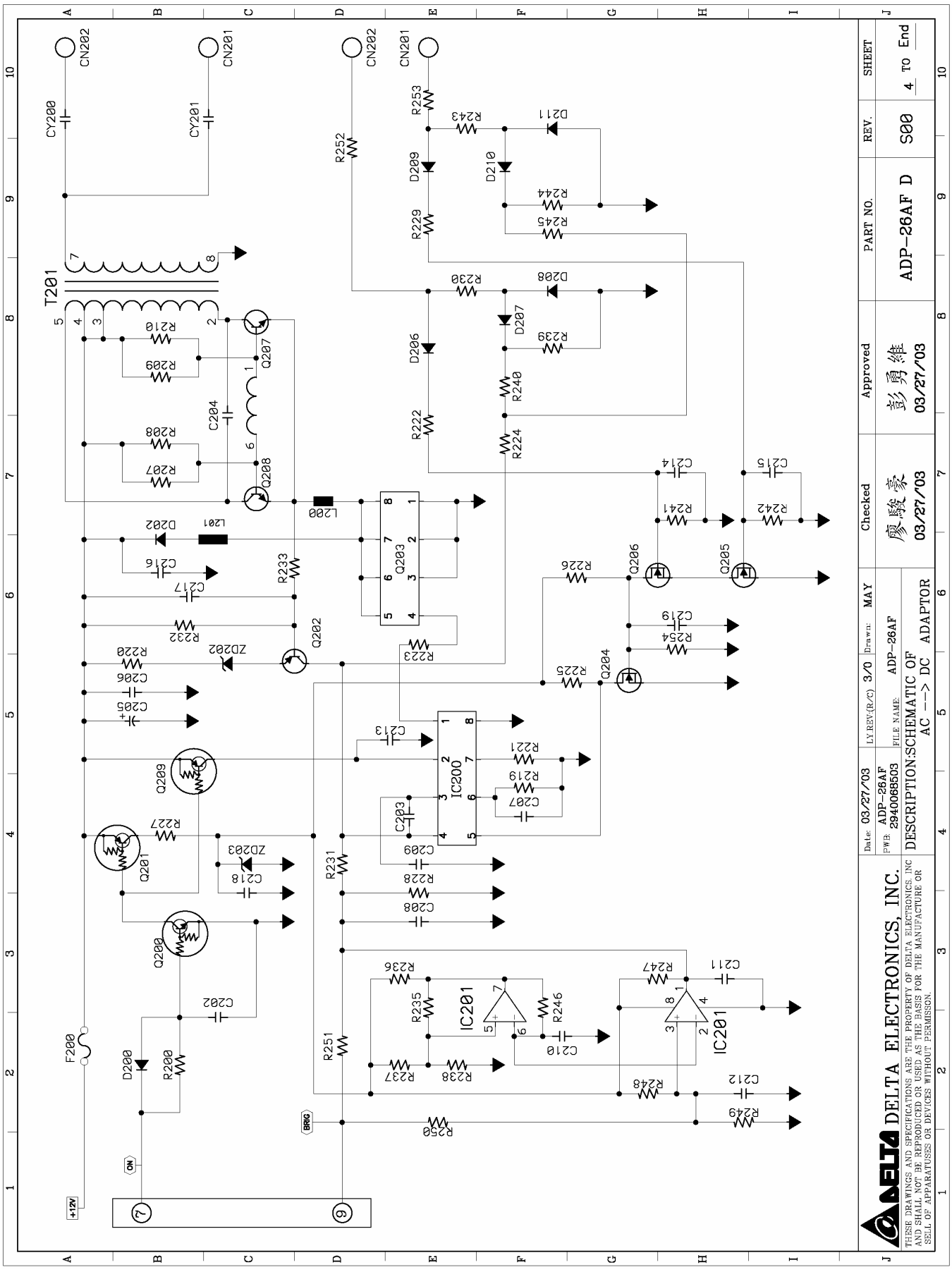
PROJECT : L5TD	Quanta Computer Inc.
Title	CONTENT PCB:
Size	Document Number: SCHEMATIC — BUTTON BOARD — Rev C
Date: Wednesday, July 16, 2003	Sheet 2 of 2

Power/Inverter Board Schematic

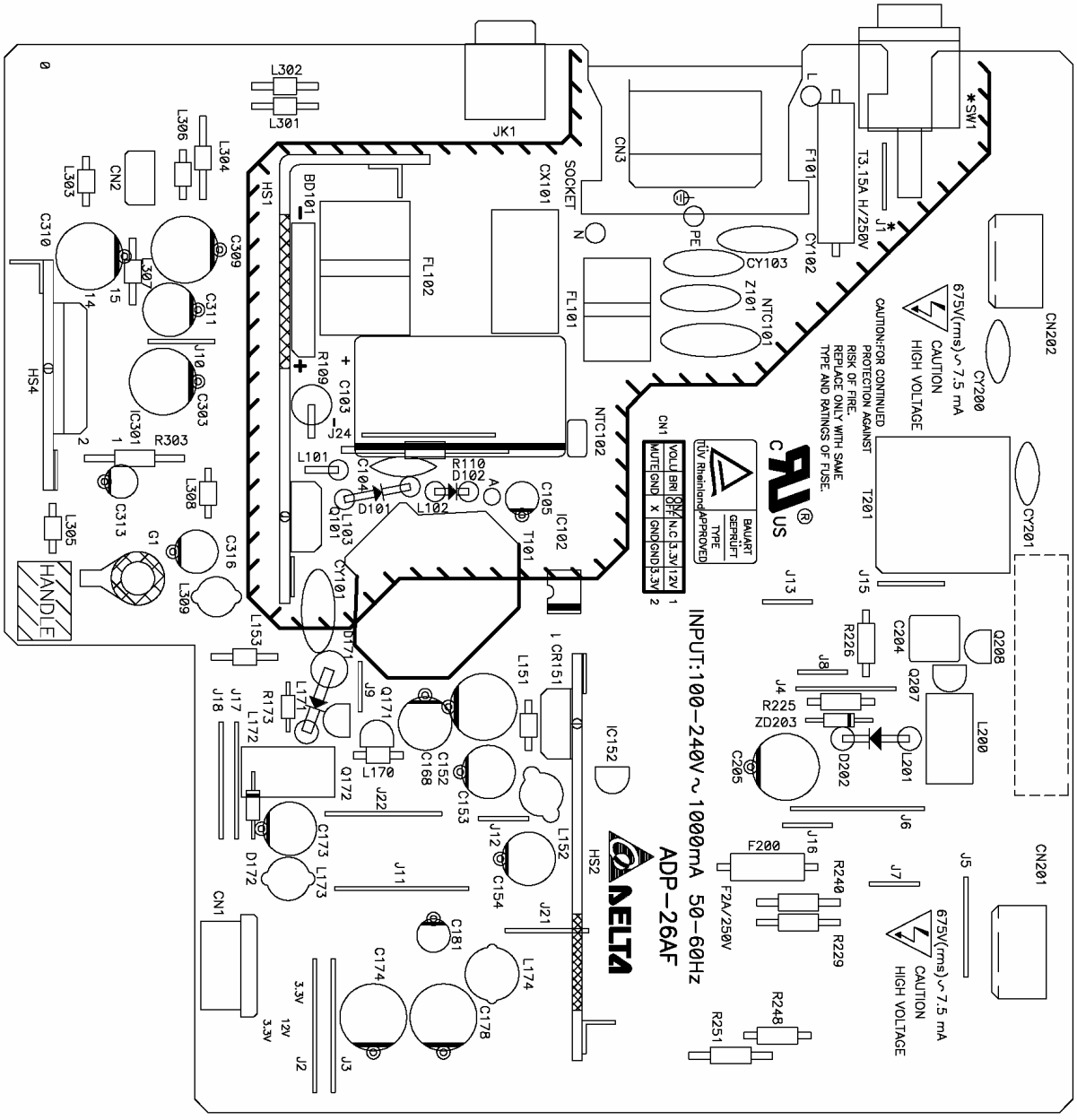



CN1
F171
F172
L170
L171
L172
L173
L174
Q171
Q172
Q173
IC151
ZD171
D171
D172
D173
Q174
Q175
C160
C172
R184
R185
R186
C169
R176
C158
R177
R178
C176
R179
C156
R157
C155
C181
C157
R172
R171
R170
C171
C168
R158
C177
C180
C178
C174
C175
C173
C179
R174
R175
R173
+12V
+3.3V
G3
ON
BRIG
VOLUME
MUTE
DELTA ELECTRONICS, INC.
Date: 03/27/'03
PWB: ADP-26AF
2940068503
LY.REV.(R/C) 3/0
FILE NAME: ADP-26AF
Drawn: MAY
Checked
廖駿豪 03/27/'03
Approved
彭爵維 03/27/'03
PART NO.
ADP-26AF D
REV.
S00
SHEET
2 TO 3
DESCRIPTION:SCHEMATIC OF
AC —> DC ADAPTOR
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSON.


CN2
IC301
VOLUME
MUTE
+12V
JK1
L301
L302
L303
L304
L305
L306
L307
L308
L309
C301
C302
C303
C304
C305
C306
C307
C308
C309
C310
C311
C313
C314
C315
C316
Q301
Q302
Q303
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
R312
D301
DELTA ELECTRONICS, INC.
DESCRIPTION:SCHEMATIC OF AC --> DC ADAPTOR
PART NO. ADP-26AF D
REV. S00
SHEET 3 TO 4
Checked 廖駿豪 03/27/03
Approved 彭勇維 03/27/03
Drawn: MAY
FILE NAME: ADP-26AF
PWB: 2940068503
Date: 03/27/03
LY.REV.(R/G) 3/0
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS INC AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSON


DELTA ELECTRONICS, INC.
DESCRIPTION:SCHEMATIC OF AC --> DC ADAPTOR
PART NO. ADP-26AF D
REV. S00
SHEET 4 TO End
Approved 彭爵維 03/27/03
Checked 廖駿豪 03/27/03
Drawn: MAY
FILE NAME: ADP-26AF
LY REV:(R/C) 3/0
PWB ADP-26AF 2940068503
Date: 03/27/03
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSION.
T201
IC200
IC201
IC201
Q200
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q208
Q209
D200
D202
D206
D207
D208
D209
D210
D211
ZD202
ZD203
F200
L200
L201
CN201
CN202
CN201
CN202
CY200
CY201
+12V
ON
BRIG

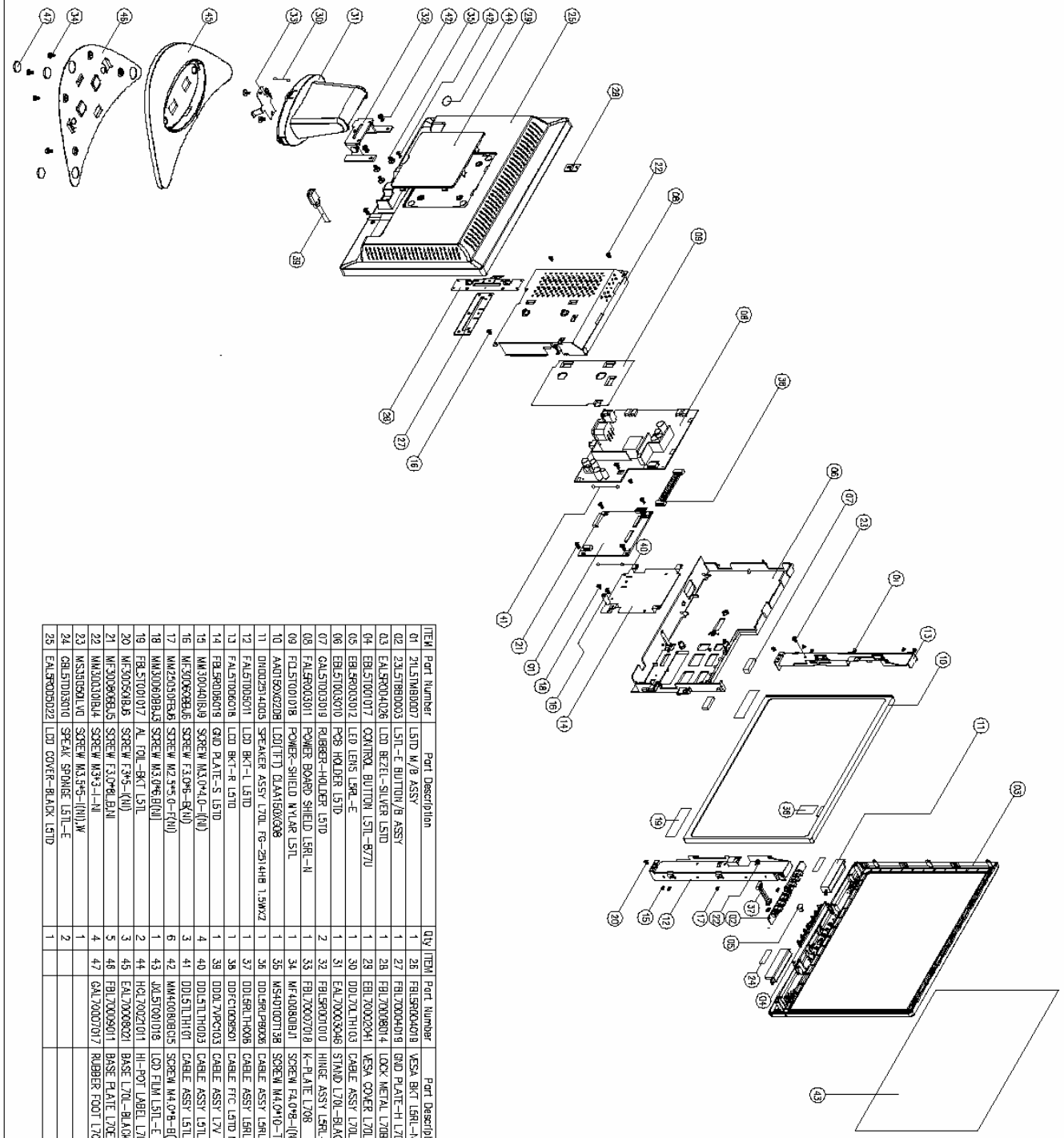
Power/Inverter Conductor view



DELTA DELTA ELECTRONICS, INC.	DRAWING NO: PM-1:26AF REV: 3
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC. AND SHALL NOT BE REPRODUCED OR USED AS THE BASE FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSION	USED ON: ADP-26AF CODE: 0
	MADE BY: MAY DATE: 03/27/'03
	P/N: 2940068503
	COMPONENT SIDE SIZE:1=1


ADP-26AF REV:3 CODE:0 2940068503
C306
C305
R101
R102
C308
R307
C304
D106
ZD101
C106
IC101
R103
R104
R113
C105
C110
ZD104
R106
R105
R107
ZD103
R116
C107
C111
Q102
R108
R117
D104
R112
Q103
R118
ZD105
C108
R111
D105
D103
R115
ZD102
R114
R301
C301
R308
C307
R302
C302
R304
Q301
C315
R310
Q302
R309
Q303
R312
R306
R311
C314
D301
R305
R252
R230
D207
D208
D206
R222
R241
C214
R239
R207
R208
R209
R210
Q206
R254
C219
Q205
Q204
C215
R242
R152
R151
C151
C172
Q203
R223
R183
R181
C159
R180
R153
R154
C171
D173
R185
R184
Q175
R186
Q173
Q174
C169
C218
C209
C203
IC200
R221
C207
R219
R159
R182
R171
R172
C158
C157
R178
C160
C179
C213
Q209
Q202
C217
R232
R233
ZD202
R220
C216
C206
C156
R157
IC151
R175
C176
R177
R174
R179
R178
R170
C177
R158
C155
R224
R253
D209
R243
D210
D211
Q201
R227
R237
R238
Q200
C210
R200
D200
C202
R245
R244
R235
R246
R236
IC201
C212
R249
ZD171
C180
F172
F171
C175
R247
C211
R231
R228
C208
R250

11. EXPLODED VIEW Plsease see the L5E_exploded_Assy_1.pdf

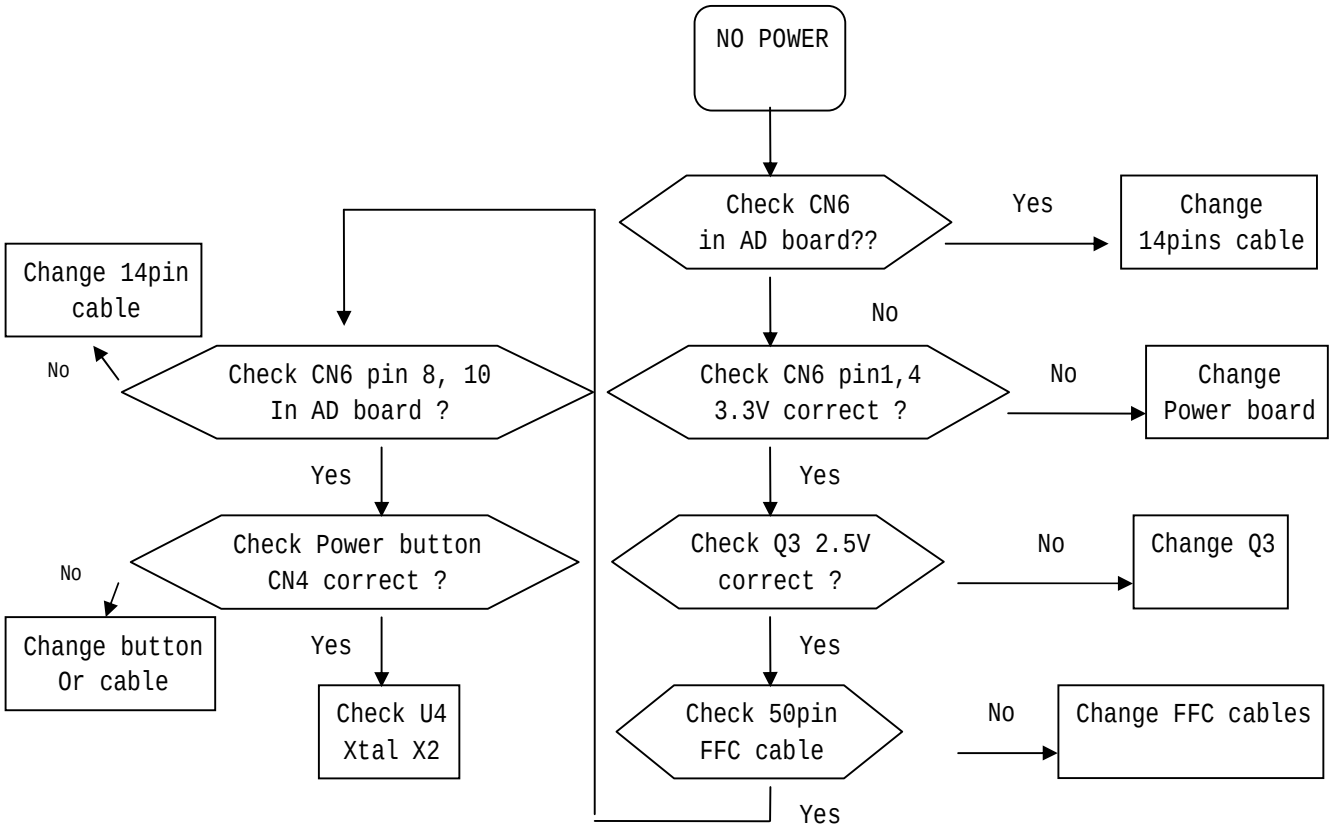


ITEM	Part Number	Part Description	Qty
01	21L5TMB0007	L5TD M/B ASSY	1
02	23L5TBB0003	L5TL-E BUTTON/B ASSY	1
03	EAL5R0040A6	LCD BEZEL-SILVER L5TD	1
04	EBL5T001017	CONTROL BUTTON L5TL-B77U	1
05	EBL5R003012	LED LENS L5R-E	1
06	EBL5T003010	PCB HOLDER L5TD	1
07	CAL5T003019	RUBBER-HOLDER L5TD	2
08	FAL5R003001	POWER BOARD SHIELD L5RL-N	1
09	FCL5T001018	POWER-SHIELD MYLAR L5TL	1
10	AA01E0X020B	LCD(TFT) CLAA150XG20B	1
11	DN10D2514005	SPEAKER ASSY L7DL FG-2514-HB 1.5W*2	1
12	FAL5T0D5011	LCD BKT-L L5TD	1
13	FAL5T0D6018	LCD BKT-R L5TD	1
14	FBL5R0D6019	GND PLATE-S L5TD	1
15	MM3004016A9	SCREW M3.0*4.0-(NI)	4
16	MF3005X3BJ6	SCREW F3.0*6-BK(NI)	3
17	MM2505F8A6	SCREW M2.5*5.0-F(NI)	6
18	MM3006B0BJ3	SCREW M3.0*6.8(NI)	1
19	FBL5T001017	AL FOIL-BKT L5TL	2
20	MF3005X1BJ5	SCREW F3.0*5-(NI)	3
21	MF3006X8BJ5	SCREW F3.0*6.8-NI	5
22	MM3003018A4	SCREW M3*3-I-NI	4
23	MS3B05B9LVG	SCREW M3.5*5-(NI).W	1
24	CBL5T0D3010	SPEAK SPONGE L5TL-E	2
25	EAL5R0D5022	LCD COVER-BLACK L5TD	1

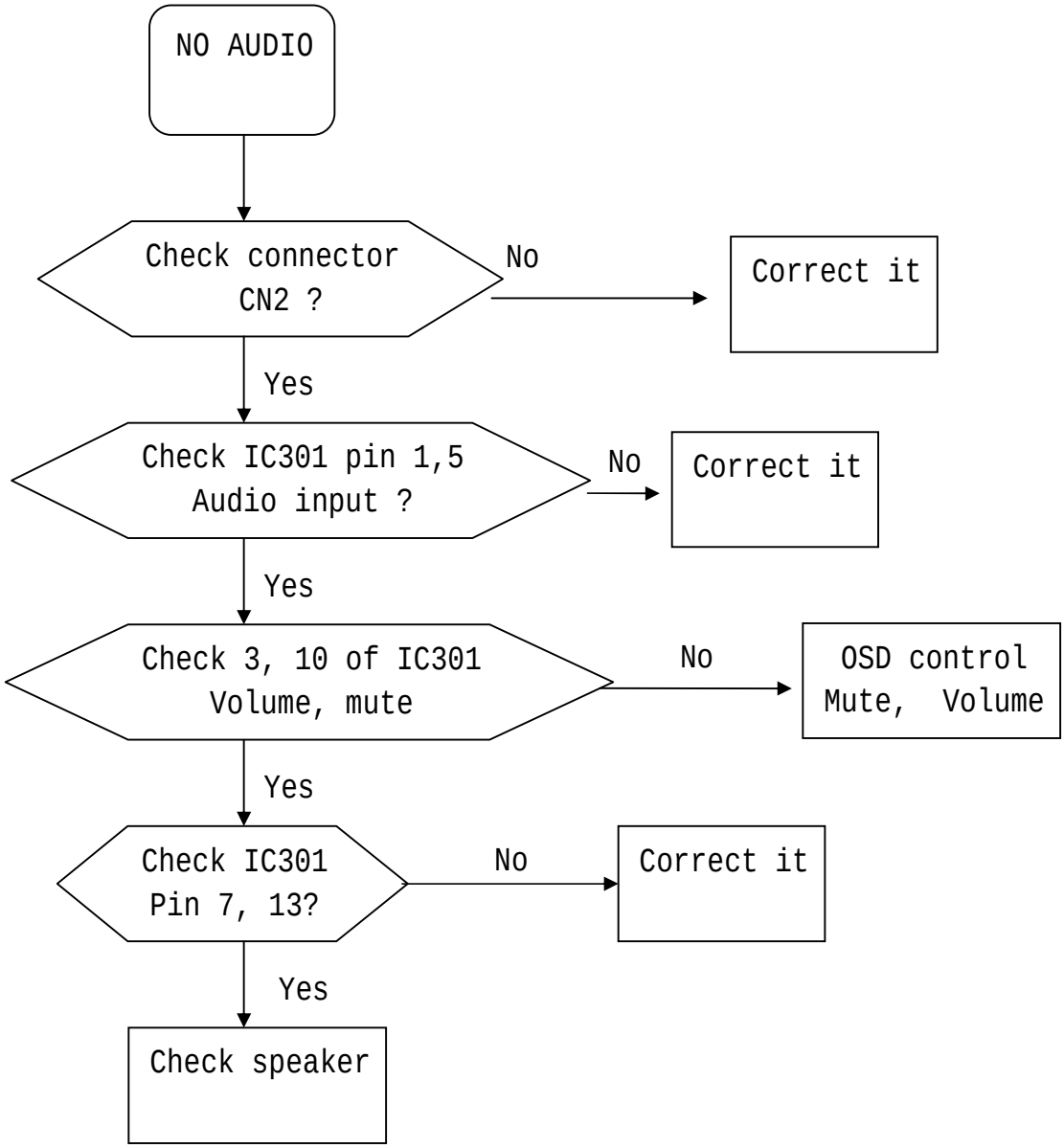
ITEM	Part Number	Part Description	Qty
26	FBL5R0Q4019	VESA BKT L5RL-N	1
27	FBL7000A019	GND PLATE-H L7DB	2
28	FBL7000B014	LOCK METAL L7DB	1
29	EBL7000Z041	VESA COVER L7DL BLACK	1
30	DDL7DL7H103	CABLE ASSY L7DL STAND-HINGE	1
31	EAL7000C046	STAND L7DL-BLACK	1
32	FBL5R0D1010	HINGE ASSY L5RL-N	1
33	FBL7000701B	K-PLATE L7DB	1
34	MF4008A0B1	SCREW F4.0*8-(NI)	6
35	MS4D10DT13B	SCREW M4.0*10-T(MC)	3
36	DDL5RLPB006	CABLE ASSY L5RL MB-POWER	1
37	DDL5RLTH006	CABLE ASSY L5RL BUTTON	1
38	DDFC1009501	CABLE FFC L5TD MB-LCD	1
39	DDQL7VPC103	CABLE ASSY L7V MB-VGA	1
40	DDL5TLTH003	CABLE ASSY L5TL MB-CHASSIS	1
41	DDL5TLTH101	CABLE ASSY L5TL POWER-CHASSIS	1
42	MM4D08B8C5	SCREW M4.0*8-B(W\LOK)	2
43	JKL5T001018	LCD FILM L5TL-E	1
44	HQL7002101	HI-POT LABEL L7DL	1
45	EAL7000B021	BASE L7DL-BLACK	1
46	FBL7000A011	BASE PLATE L7DE	1
47	GAL7000701?	RUBBER FOOT L7DL-E	1

12. TROUBLE SHOOTING HINTS

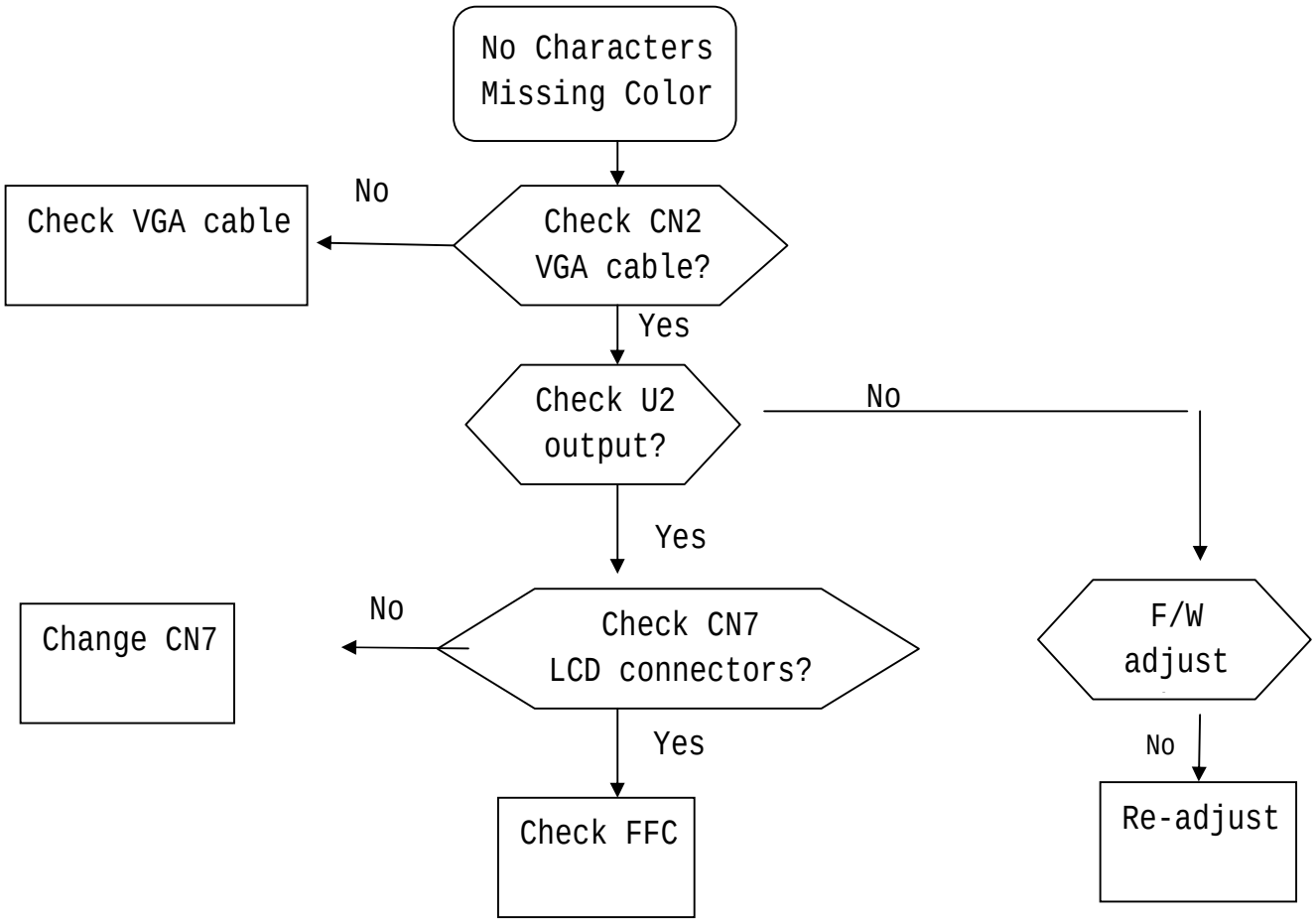
1. No Power



2. No Audio


NO AUDIO
Check connector CN2 ?
No
Correct it
Yes
Check IC301 pin 1,5 Audio input ?
No
Correct it
Yes
Check 3, 10 of IC301 Volume, mute
No
OSD control Mute, Volume
Yes
Check IC301 Pin 7, 13?
No
Correct it
Yes
Check speaker

3. 3. No Characters , Missing one Color



13. REPLACEMENT PARTS LIST

Level	Part Number	Part Description	Qty	Location
0	1L5TZZZMA35	L5TD LCD MONITOR(ANALOG)		
1	22L5TMB0007	L5TD M/B ASSY	1	
2	38L5TCS0005	L5TD M/B S/S ASSY	1	
3	AJ08016FF01	IC(128P) MST8016(85MHZ,FQFP)	1	U2
3	AJ00312VP18	IC(44P) MTV312MV64AJ(12MHZ,PLCC)	1	U4
3	AKE3A8S0Y01	IC,EEPROM(8P) 24LC16B/SN(2K*8,100KHZ)	1	U3
3	AL001739001	IC(3P) AIC1739-25CX(SOT89)	1	Q3
3	BA001430Z22	TRANSISTOR SMD DTC143EUA(50V,100MA)	2	Q1,Q2
3	BA039060Z01	TRANSISTOR,SMD MMBT3906(40V,200MA)	1	Q11
3	BA144EUAZ04	TRANSISTOR SMD DTC144EUA(50V,30MA)	3	Q6,Q8,Q10
3	BAM23010Z05	TRANSISTOR MOSFET SI2301DS(-12V,-2.3A)	2	Q7,Q9
3	BAN70020Z13	TRANSISTOR MOSFET 2N7002E(60V,250MA)	2	Q4,Q5
3	CH02206J909	CAPACITOR CHIP 22P 50V(+-5%,NPO,0603)	6	C40,C41,C49,C50,C51,
				C52
3	CH22206K917	CAP CHIP 2200P 50V(+-10%,X7R,0603)	4	C69,C70,C73,C74
3	CH31006K919	CAP CHIP 0.01U 50V(+-10%,X7R,0603)	2	C7,C55
3	CH34703K916	CAP CHIP 0.047UF 16V(+-10%,X7R,0603)	6	C1,C3,C4,C6,C8,
				C10
3	CH41004Z931	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603)	35	C17,C18,C19,C20,C21,
				C22,C23,C25,C26,C28,
				C30,C31,C33,C34,C36,
				C37,C38,C39,C42,C43,
				C45,C47,C48,C53,C57,
				C58,C62,C63,C64,C66,
				C67,C71,C75,C77,C78
3	CH51001K991	CAP CHIP 1U 6.3V(+-10%,X5R,0603)	4	C46,C59,C60,C61
3	CS00003J900	RESISTOR CHIP 0 1/10W+-5%(0603)	6	L2,L3,L6,R55,R72,
				R73
3	CS00004JA07	RESISTOR CHIP 0 1/8W +-5%(0805)	10	L13,L14,L19,L25,L26,
				L27,L28,L29,L31,L33
3	CS02203J902	RES CHIP 22 1/10W +-5%(0603)	8	R29,R30,R31,R32,R47,
				R48,R49,R50
3	CS07503F905	RESISTOR CHIP 75 1/10W +-1%(1608)	3	R2,R8,R12
3	CS11003J904	RESISTOR CHIP 100 1/10W +-5%(0603)	19	L1,L4,L5,L7,L15,
				L16,R1,R5,R7,R9,
				R10,R11,R13,R16,R26,
				R27,R41,R42,R56

3	CS13903J902	RES CHIP 390 1/10W +-5%(0603)	1	R25
3	CS14703J908	RESISTOR CHIP 470 1/10W+-5%(0603)	2	R43,R44
3	CS21003J906	RES CHIP 1K 1/10W +-5%(0603)	7	R14,R17,R46,R57,R58,
				R60,R61
3	CS22003J909	RES CHIP 2K 1/10W +-5%(0603)	4	R15,R18,R33,R34
3	CS31003J908	RES CHIP 10K 1/10W +-5%(0603)	12	R38,R45,R51,R52,R59,
				R62,R63,R64,R67,R74,
				R76,R77
3	CS34703J901	RES CHIP 47K 1/10W +-5%(0603)	2	R66,R69
3	CS38203J904	RES CHIP 82K 1/10W +-5%(0603)	1	R68
3	CS41003J900	RES CHIP 100K 1/10W +-5%(0603)	2	R65,R70
3	CX0E601R009	EMI FILTER CHIP HZ0805E601R(600,500MA)	5	L8,L9,L10,L11,L12
3	CX160808009	EMI FILTER SBK160808T-121Y-S(120,200MA)	6	L17,L18,L21,L22,L23,
				L24
3	DFFC50FS023	CONN SMD FFC 50P 1R FS(P0.5,H2.24)	1	CN7
3	DAL5TDMB2D6	PCB(M/B) L5TD(MST) MB(2L,98*125,REVD)	1	
3	CH21006K917	CAP CHIP 1000P 50V(+-10%,X7R,0603)	1	C44
2	DFHD05MR633	CONN DIP HEADER 5P 1R MR(P2.0,H5.1)	1	CN4
2	DFHD12MR251	CONN DIP HEADER 12P 2R MR(P2.54,H5.1)	1	CN6
2	DFDS15FR050	CONN D-SUB 15P 3R FR,P1.15,H12.55,NO SRW	1	CN1
2	BG611059319	CRYSTAL DIP 11.0592MHZ(+-30PPM,49/US)	1	X2
2	BG614318064	CRYSTAL DIP 14.318MHZ(+-30PPM,49/US)	1	X1
2	CC62204MD23	CAP ELEC 22U 25V(+-20%,105C,5*11,2000HR)	6	C16,C24,C27,C29,C32,
				C35
2	CC73303MD51	CAP ELEC 330U 16V(+-20%,105C,8*11,2000HR	2	C72,C76
1	AS0201260C1	ADP/INV W/AUD W/OSW ADP-26AFDA 90~264V1A	1	
1	23L5TBB0003	L5TL-E BUTTON/B ASSY	1	
2	35L5TSS0005	L5TL-E BUTTON/B S/S ASSY	1	
3	CS12204JA01	RESISTOR CHIP 220 1/8W+-5%(0805)	1	R100
3	CS13304JA08	RESISTOR CHIP 330 1/8W+-5%(0805)	1	R101
3	CS15604FA02	RESISTOR CHIP 560 1/8W ?%(0805)	1	R102
3	CS21204FA09	RESISTOR CHIP 1.2K 1/8W +-1%(0805)	1	R103
3	CS23304JA00	RESISTOR CHIP 3.3K 1/8W+-5%(0805)	1	R104
3	DAL5RLTB1C7	PCB(BUTTON) L5RL TL(1L,130*12,REVC)	1	
2	BEYG0024DA5	LED(DIP) YELLOW/GREEN(L-3WAFN/1GYW)	1	LED1
2	DFHD05MR633	CONN DIP HEADER 5P 1R MR(P2.0,H5.1)	1	CN1
2	DHP00062N10	SWITCH PUSH BUTTON(DTSA-62N,50MA,12V)	7	SW1,SW2,SW3,SW4,SW5,
				SW6,SW7
1	24L5TLBMA27	L5TD LCD BEZEL ASSY(SILVER)	1	

2	32L5TLBMA17	L5TD-E LCD BEZEL SUB ASSY(SILVER)	1	
3	EAL5R004026	LCD BEZEL-SILVER L5TD(EAL5RL004,R3B)	1	
3	EBL5T001017	CONTROL BUTTON L5TL-877U(EBL5T001,REV3A)	1	
4	EBL5T001009	CONTROL BUTTON L5TL	1	
5	RB0D350GY01	ABS94HB D-350 BAYER 70 19 22 GRAY	5	
4	RC00R951003	PAINT P-COAT 877U SILVER OR-951	3	
4	RJXSG139001	THINNER PLASTICOAT THINNER 480-XSG-139	2	
3	EBL5R003012	LED LENS L5RL-E(EBL5R003,REV3A)	1	
2	36L5TPAMA19	L5TD-E PCB HOLDER ASSY	1	
3	EBL5T003010	PCB HOLDER L5TD(EBL5T003,REV3A)	1	
3	GAL5T003019	RUBBER-HOLDER L5TD(GAL5T003,REV3A)	2	
2	37L5TPBMA07	L5TL-E POWER/B SHIELD ASSY	1	
3	FAL5R003011	POWER BOARD SHIELD L5RL-N(FAL5R003,R3A)	1	
4	RH110250602	STEEL SECC 247*1000MM*T0.6	230	
4	MBL70002016	NUT M4.0*7.5 T0.3(MBL70002,REV3A)	2	
3	FCL5T001018	POWER-SHIELD MYLAR L5TL(FCL5T001,REV3A)	1	
2	AA0150XG208	LCD(TFT) CLAA150XG08(15",1024*768,XGA)	0	
2	AA0150XG216	LCD(TFT) CLAA150XG08 V2(15",1024*768,XGA	1	
2	DN002514005	SPEAK ASSY L70L FG-2514H8 1.5WX2	1	
2	FAL5T005011	LCD BKT-L L5TD(FAL5T005,REV3A)	1	
2	FAL5T006018	LCD BKT-R L5TD (FAL5T006,REV3A)	1	
2	FBL5T001017	AL FOIL-BKT L5TL(FBL5T001,REV3A)	2	
2	FBL5T006019	GND PLATE-S L5TD(FBL5T006,REV3B)	1	
2	MF30050IBJ6	SCREW F3*5-I(NI)	2	
2	MF30060BBJ6	SCREW F3.0*6-B(NI)	3	
2	MF30080BBJ5	SCREW F3.0*8L,B,NI	5	
2	MM25050FBJ6	SCREW M2.5*5.0-F(NI)	6	
2	MBLI1004018	IO NUT LI1(MBLI1004,REV3A)	2	
2	MS35050ILV0	SCEREW M3.5*5-I(NI),W	1	
2	MM30040IBJ9	SCREW M3.0*4.0-I(NI)	4	
2	MM30030IBJ4	SCREW M3*3-I-NI	4	
2	GBL5T003010	SPEAK SPONGE L5TL-E(GBL5T003,REV3A)	2	
2	DDL5RLTH006	CABLE ASSY L5RL BUTTON(5P,REV1A)	1	
2	DEFC1009501	CABLE FFC L5TD MB-LCD(50P/50P 100MM RE2A	1	
1	25L5TLCMA15	L5TD LCD COVER ASSY(BLACK)	1	
2	33L5TLSMA11	L5TD LCD COVER SUB ASSY(BALCK)	1	
3	EAL5R005022	LCD COVER-BLACK L5TD(EAL5RL005,R3B)	1	
3	FBL5R004019	VESA BKT L5RL-N(FBL5R004,REV3A)	1	
4	RH1B2141005	STEEL SECC 140*1116MM*T1.0	50	

4	RH405020209	STEEL SUS301 46*23MM*T0.2 CP	1.8	
4	MBL70001010	NUT M4.0*7.5 T0.5(MBL70001,REV3A)	2	
3	FBL70004019	GND PLATE-H L70B(FBL70004,REV3A)-L	1	
4	RH111101007	STEEL SECC 97*1116MM*T1.0	29	
4	RH405020209	STEEL SUS301 46*23MM*T0.2 CP	1.8	
3	FBL70008014	LOCK METAL L70B(FBL70008,REV3A)	1	
4	RH102010801	STEEL SECC 23*9MM*T0.8	1.4	
2	EBL70002041	VESA COVER L70L BLACK(EBL70002,REV3B)	1	
1	26L5TSAMA12	L5TD STAND ASSY(BLACK)	1	
2	DDL70LTH103	CABLE ASSY L70L STAND-HINGE(1P, REV1A)	1	
2	EAL70003046	STAND L70L-BLACK(EAL70003,REV3B)	1	
2	FBL5R001010	HINGE ASSY L5RL-N(FBL5R001,REV3A)	1	
2	FBL70007018	K-PLATE L70B(FBL70007,REV3A)	1	
3	RH407050211	STEEL SUS301 71.5*47MM*T0.2 CP	5.5	
2	MF40080IBJ1	SCREW F4.0*8-I(NI)	2	
2	MS40100T138	SCREW M4.0*10-T(MC)	3	
1	27L5TCSMA27	L5TD CHASSIS ASSY(BLACK)	1	
2	DDL5RLPB006	CABLE ASSY L5RL MB-POWER(12P,REV1A)	1	
2	MF30080BBJ5	SCREW F3.0*8L,B,NI	2	
2	MM40080BCI5	SCREW M4.0*8-B(NI,NYLOK)	2	
1	28L5TPKMA29	L5TD PACKING ASSY(ANALOG)	1	
2	DDL5TLPC107	CABLE ASSY L5TL 1.8M PC-MONITOR(REV3A)	1	
2	DM33181801	POWER CORD SP-023+IS-14H05VV-F3P 1.8M EU	1	
2	HAL7V001012	EPE BAG L7V(HAL7V001,REV3A)	1	
2	HBL5R003012	END CAP-R L5RL-E(HBL5R003,REV3A)	1	
2	HBL5R004019	END CAP-L L5RL-E(HBL5R004,REV3A)	1	
2	HCL5T007016	RATING LABEL L5TL-E(HCL5T007,REV3A)	1	
2	HCL70002017	BARCODE LABELL70E(HCL70002,REV3A)	4	
2	HCL70021011	HI-POT LABEL L70L(HCL70021,REV3A)	1	
2	HCLM5013016	TRAVEL CARD LM5A(HCLM5013,REV3A)	1	
2	HDL5T006011	MANUAL L5TL-E(HDL5T006,REV3A)	1	
2	HFL5T004010	CARTON L5TL-E(HFL5T004,REV3A)	1	
2	JXL5T001018	LCD FILM L5TL-E(JXL5T001,REV3B)	1	
2	DD0L7VPC103	CABLE ASSY L7V MB-VGA(15/15P,REV1A)	1	
1	29L5TBAMA18	L5TD BASE ASSY(BLACK)	1	
2	EAL70008021	BASE L70L-BLACK(EAL70008,REV3B)	1	
2	FBL70009011	BASE PLATE L70E(FBL70009,REV3A)	1	
3	RH1B2271006	STEEL SECC 268*1116MM*T1.0	330	
2	GAL70007017	RUBBER FOOT L70L-E(GAL70007,REV3A)	3	

2	MF40080IBJ1	SCREW F4.0*8-I(NI)	4	

14. SPARE PARTS LIST

Level	Part Number	Part Description	Qty	Location
0	1L5TZZZMA35	L5TD LCD MONITOR(ANALOG)		
1	22L5TMB0007	L5TD M/B ASSY	1	
1	23L5TBB0003	L5TL-E BUTTON/B ASSY	1	
1	AS0201260C1	ADP/INV W/AUD W/OSW ADP-26AFDA 90~264V1A	1	
2	AA0150XG208	LCD(TFT) CLAA150XG08(15",1024*768,XGA)	1	
2	AA0150XG216	LCD(TFT) CLAA150XG08 V2(15",1024*768,XGA	1	
2	32L5TLBMA17	L5TD-E LCD BEZEL SUB ASSY(SILVER)	1	
3	EBL5T003010	PCB HOLDER L5TD(EBL5T003,REV3A)	1	
2	37L5TPBMA07	L5TL-E POWER/B SHIELD ASSY	1	
2	DN002514005	SPEAK ASSY L70L FG-2514H8 1.5WX2	1	
2	FAL5T005011	LCD BKT-L L5TD(FAL5T005,REV3A)	1	
2	FAL5T006018	LCD BKT-R L5TD (FAL5T006,REV3A)	1	
2	FBL5T001017	AL FOIL-BKT L5TL(FBL5T001,REV3A)	2	
2	FBL5T006019	GND PLATE-S L5TD(FBL5T006,REV3B)	1	
2	GBL5T003010	SPEAK SPONGE L5TL-E(GBL5T003,REV3A)	2	
2	33L5TLSMA11	L5TD LCD COVER SUB ASSY(BALCK)	1	
2	EBL70002041	VESA COVER L70L BLACK(EBL70002,REV3B)	1	
2	EAL70003046	STAND L70L-BLACK(EAL70003,REV3B)	1	
2	FBL5R001010	HINGE ASSY L5RL-N(FBL5R001,REV3A)	1	
2	FBL70007018	K-PLATE L70B(FBL70007,REV3A)	1	
1	29L5TBAMA18	L5TD BASE ASSY(BLACK)	1	
2	HFL5T004010	CARTON L5TL-E(HFL5T004,REV3A)	1	
2	HDL5T006011	MANUAL L5TL-E(HDL5T006,REV3A)	1	
2	JXL5T001018	LCD FILM L5TL-E(JXL5T001,REV3B)	1	
2	HAL7V001012	EPE BAG L7V(HAL7V001,REV3A)	1	
2	HBL5R003012	END CAP-R L5RL-E(HBL5R003,REV3A)	1	
2	HBL5R004019	END CAP-L L5RL-E(HBL5R004,REV3A)	1	
2	HCL5T007016	RATING LABEL L5TL-E(HCL5T007,REV3A)	1	
2	DDL5TDPC009	CABLE ASSY L5TD MB-VGA(15/15P,REV1A)	1	
2	DDL5RLPB006	CABLE ASSY L5RL MB-POWER(12P,REV1A)	1	
2	DDL5TLPC107	CABLE ASSY L5TL 1.8M PC-MONITOR(REV3A)	1	
2	DDL5RLTH006	CABLE ASSY L5RL BUTTON(5P,REV1A)	1	
2	DEFC1009501	CABLE FFC L5TD MB-LCD(50P/50P 100MM RE2A	1	
2	DDL70LTH103	CABLE ASSY L70L STAND-HINGE(1P, REV1A)	1	

2	DM333181801	POWER CORD SP-023+IS-14H05VV-F3P 1.8M EU	1	

Screw spare parts

	PART NO.	DESCRIPTION		
	MF40080IBJ1	SCREW F4.0*8-I(NI)		
	MF30080BBJ5	SCREW F3.0*8L,B,NI		
	MM40080BCI5	SCREW M4.0*8-B(NI,NYLOK)		
	MF40080IBJ1	SCREW F4.0*8-I(NI)		
	MS40100T138	SCREW M4.0*10-T(MC)		
	MF30050IBJ6	SCREW F3*5-I(NI)		
	MF30060BBJ6	SCREW F3.0*6-B(NI)		
	MF30080BBJ5	SCREW F3.0*8L,B,NI		
	MM25050FBJ6	SCREW M2.5*5.0-F(NI)		
	MS35050ILV0	SCEREW M3.5*5-I(NI),W		
	MM30040IBJ9	SCREW M3.0*4.0-I(NI)		
	MM30030IBJ4	SCREW M3*3-I-NI		

15. Auto White Balance Procedure

1. Connect signal to monitor. The display signal need contain real black and full white.
2. Press "Auto" button(don't release) when power ON(LED display Amber).
3. Press OSD select FACTORY 2, Auto Color, RUN(For AD converter calibration on R, G and B gain, offset).
4. Select Color Update, RUN.
5. Press OSD select COLOR into 6500 and check by color analysis (If adjustment Press OSD select FACTORY 1 for Adjust the R, G, B gain. Please make color update when finished adjustment on 6500)
6. Press OSD select COLOR into 9300 and check by color analysis (If adjustment Press OSD select FACTORY 1 for Adjust the R, G, B gain. Please make color update when finished adjustment on 9300)

* Please make sure that Brightness set 100, Contrast set 80 when adjust(factory default).
* The adjustment result needs to be checked by Color Analysis like CA110, the input signal 0.7V and full white pattern while on check.